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AMHERST COLLEGE

"Report Of The Curriculum Review Committee"

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March, 1959

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AMHERST COLLEGE

Report Of
The Curriculum Review Committee

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I. INTRODUCTION

The Committee on the Review of the Curriculum has devoted a considerable amount of time to an evaluation of our curriculum and related educational policies. We have done so under a mandate to recommend any changes that might help to make it possible for Amherst College to continue in the tradition of offering the best education her resources will permit. An assessment of the current situation has convinced us that a number of changes are needed. Our conception of these is embodied in the proposals of this report.

It is a sign of health when the faculty of a college endorses a major review of its educational program and implies thereby a willingness to change it, if need for changes can be established. Any college risks stagnation if it provides no mechanism for periodic reviews of its curriculum and educational policies, particularly when doubts arise about their effectiveness. Were these reviews to do nothing more than to allay such doubts and free us from their impeding effects, they would be worth the required expenditure of energy. They would be doubly worthwhile, if they could be made productive of new ideas and practices which result in a better educational program.

When curricular changes are proposed and discussed, several things should be kept in mind. A curriculum is an ever-changing means to an end which liberal arts colleges have been seeking for a long time.

As a means to an end, a curriculum should never be made the primary basis of establishing the identity of a college. To do so can only be obstructive of changes when these become necessary. The major function of a curriculum is to provide a framework within which the student is brought into contact with teachers, books, studios, and laboratories. It is what happens during these contacts that matters most. Our continual concern must be to have a curriculum that holds the greatest promise of making these contacts as productive as possible of the best educational results. This is the concern that has motivated us to formulate a variety of recommendations for change. We do not view these recommendations as a curricular panacea. They simply reflect our best judgment as to how the present faculty can most effectively use the resources of Amherst College for the purpose of offering a good education.

What is presented in this report is the product of intensive and prolonged thought. It is scarcely necessary to point out that the recommendations it contains are somewhat different from what we as individuals might have formulated without the benefit of reactions received from our colleagues, or the necessity of adjusting individual views to majority opinions in the committee. The latter is necessary in any collective decisions on matters of curricular policy. Complete agreement on such policy is difficult, simply because the problem of what constitutes a good educational program is far too complex to admit of any single solution. We have thus found it impossible to avoid controversial issues, but in dealing with these issues we have tried our best to resolve differences of opinion into the consensus expressed in this report.

One final introductory comment is needed concerning the writing of this report. The aim has been to keep it as brief as possible, while at the same time reflecting the main currents of thought and opinion that have developed in our deliberations. It is a difficult task, indeed, to write a report of this kind in such a way as to make it completely representative of either the basic views of each committee member or his preferred style of expression. Whatever defects there are in this respect may be remedied by individual committee members during the period of discussion which we trust this report will elicit.

II. A REVIEW OF RECENT CURRICULAR DEVELOPMENTS AT AMHERST COLLEGE

During the last twenty years, two "new curricula" were instituted at Amherst College. The first was in 1939, the second in 1947. A brief review of these curricular structures and of the changes that have been made in the latter since 1947 will help to keep the recommendations of this report in proper perspective.

The 1939 Curriculum

The 1939 Curriculum was an adaptation of the type commonly adopted by American colleges and universities in replacement of or as an alternative to a completely free-elective system. The latter, as is well known, was put into effect at Harvard University under President Eliot's leadership. Prior to this innovation, most curricula prescribed the major content of a four-year program of studies. In 1830, for example, the Yale Curriculum could be placed on a single page of a catalog, and the entire course of study was prescribed. Virtually the same policy prevailed at Amherst in 1850.

In the latter part of the nineteenth century, however, it became increasingly difficult to maintain a completely prescribed program because of the rapid proliferation of knowledge and the development of new disciplines, whose partisans clamored for representation within college and university curricula. The easiest way to accomodate to these developments, some thought, was to make a complete break with a standard prescribed curriculum and open the door to new subjects. This was the direction followed by Harvard and other institutions; and at the same time, in a number of colleges and universities, students were given almost complete freedom to decide what they would study. In support of this practice at Harvard, President Eliot argued that if every intellectual activity is important when properly pursued, then no subject may rightfully be prescribed for every student.

After experience with a free-elective system had disclosed some of its defects, a distribution-concentration system came into favor. It demanded that a student spread his course elections over the various broad divisions of subject matter and devote some time to concentrated work in one subject. Such a curriculum was instituted at Amherst in 1939. It was at this time that our present tripartite division of the curriculum first appeared. This divisional structure was the basis of a distribution requirement which demanded that a one-year course be elected from each of the three divisions in both the freshman and sophomore years. In addition, the plan put into effect in 1939 required (a) one of three English courses, (b) a reading knowledge of French or German, (c) work in both Physical Education and Public Speaking, and (d) a concentrated program of studies which consisted of five year-courses, and which could begin in the freshman year. This, in brief outline, was the plan replaced in 1947 by our present type of curriculum.

The 1947 Curriculum

The 1947 Curriculum was built around several basic ideas. Basic was the belief that a fairly large portion of the first two years of college work should be prescribed, in order to give students a common body of knowledge and experience. The prescription of certain courses was considered to be a necessary part of a liberal arts curriculum, and to be essential to the creation of an intellectual community, in which every student would be given "the sense that he has a community of knowledge and interest with all of his fellow students."[1] It was held to be more significant that students have a common body of knowledge than that they have "some particular kind of knowledge"-especially a body of common knowledge which could provide the basis for later specialization in any field of the curriculum.

The architects of our existing curriculum- the Faculty Committee on Long Range Policy[2]- were particularly interested in preventing students from making a free election of unconnected courses presumed to be of equal value. "Nothing," it was asserted, "is more in contradiction with the purpose of a liberal education than a curriculum composed of a large number of discrete and uncoordinated courses, all treated as if they were of equal importance."[3] Moreover, "if a liberal education is to be comprehensive, it should be organized in such a way as to unify the most fundamental cultural interests of the society in which we live."[4] To achieve the goals of introducing a higher degree of organization into a student's program of studies, reliance was placed upon the mechanism of course prescription. This was also favored as being a good way to guarantee that all students would derive the benefits of at least some essential types of educational experiences which they might otherwise avoid, either through ignorance or for less respectable reasons.

The 1945 Committee also sought to make provisions for what has come to be designated as "general education." The concept of "general education" was presumably first used in the 1920's, and through a concerted effort to build an educational ideology around it in the 1930's, it has since gained widespread currency. Since the end of World War II it has been closely associated with the Harvard Report on General Education in a Free Society, published in 1945.

In the Report of the 1945 Committee, provisions were made for "general education" by recommending three freshman-sophomore sequences of courses, one in each of the three major divisions of the curriculum. In this way the first two years of college work were set apart as having a function to perform differing from that of the last two years. Strong encouragement was given to the development of interdisciplinary "general education" courses. Examples were the recommended sophomore year-courses

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1. Gail Kennedy(editor), Education at Amherst(New York: Harpers,1955), p.28. 2. This Committee will hereafter be referred to as the 1945 Committee, for it was in 1945 that the Report of the Faculty Committee on Long Range Policy was issued. 3. Ibid., p.28. 4. Ibid., p.27.

in (a) Fine Arts, Music, and Drama, (b) Evolution, (c) American Studies. The basic idea was that students should be required to spend a large portion of their time during the first two years in "general education" sequence-courses before being permitted, during the upperclass years, to engage in more specialized forms of study. The concept of "general education" implied in these proposals was that it should (a) be primarily concerned with what all students should know something about, regardless of their special interests, (b) come early in a student's career, (c) provide a necessary foundation for later study of more specialized or departmental courses, and (d) cut across the boundaries of existing disciplines. "General education" was thus set apart from the kind of education a student would presumably receive when he became immersed in the offerings of a particular deparment.

Although compromises became necessary when attempts were made to put the ideas of the 1945 Committee into effect, serious efforts were put forth for a while to achieve the general purposes of the recommendations. "General education" courses appeared in all three divisions of the curriculum, and were made available in both the freshman and sophomore years. However, two of the sophomore courses that were developed as a part of this plan are no longer being offered. The sophomore Humanities course[5] has been abandoned, and an interdisciplinary course in Evolution has been replaced by a one-semester departmental course in the same subject.

Another basic idea emphasized by the 1945 Committee was that students should be encouraged at all times to take a direct part in the processes of learning and the generation of knowledge. This was referred to by the phrase "learning by doing." In accordance with this doctrine, courses that consisted solely of a series of lectures and readings which did no more than to "inoculate" the student with inert ideas and make him the master of an ill-assorted array of unassimilated facts were disparaged. Laboratory work done in the natural science courses was considered to be an important model for emulation in other types of courses.

In addition to stressing the value of common educational experiences, prescribed "general education" courses, and learning by doing, the 1945 Committee offered a variety of suggestions for the improvement of education at Amherst. Among other things, a four-course plan was recommended, and a plea was made to place strict limitation on the scope of the curriculum and to reduce the number of course offerings:

> "There should be far fewer courses than are now in the program of the average college. To limit the number of courses is not to say that a knowledge of excluded subjects is undesirable. Everything, obviously, is worth knowing in some relation and for some purpose. But some things are in general better worth knowing because they have more relations and fulfill larger purposes than do others...it would be better to multiply a few standard courses rather than to add new, different, and presumably less important ones to the curriculum." [6]

---

5. The course in Music, Drama, and Fine Arts.
6. Ibid., p.28.

It was further proposed that during the first two years there should be as sharp a break as possible with the student's secondary school experience, and a stress was placed upon the importance of challenging the student to develop the habit of reading:

> "We believe that it is a desirable thing for an educated man to have acquired the habit of reading. We believe that this habit has been on the decline among college students, and regretting this, we feel that the college should make a conscious effort to maintain or revive it."[7]

Finally, an interesting suggestion, which has not been pursued, was made to the effect that students should be required to spend some time during the summer on a reading program and be given an examination on this at the conclusion of the summer.

Major Curricular Changes Since 1947

Since 1947 a number of changes in the curriculum have been approved by the faculty. These may be briefly summarized as follows:

1. In 1950 a credit-hour system was approved, with a total of 120 credit hours being required for graduation. This was a departure from the four-course plan instituted in 1947, for it has had the effect of creating a situation in which the majority of students are again carrying an average of five courses per semester.

2. In 1952 several changes were made:

(a) The credit-hour requirement for graduation was increased from 120 to 128. This was an adaptation to the ROTC program which began during the academic year 1951-1952. Although this program terminated at the end of the academic year 1955-1956, the 128-hour requirement is still in effect.

(b) A change was made in the divisional arrangement of courses. This involved shifting philosophy and religion to the Humanities divisions and psychology to the Natural Science division.

(c) The distribution requirement for the upperclass years, according to which students were expected to elect at least fifteen credit hours of work outside of the division of the major subject, was rephrased to make it possible to waive it for honors students.

3. In 1953 it was voted to permit the waiving of the distribution requirement for both honors and non-honors students.

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[7] *Ibid.*, p.59.

4. In 1955 two changes went into effect:

(a) The sophomore Humanities course offered jointly by the departments of Music, Fine Arts, and Dramatic Arts was dropped.

(b) A new humanities requirement was adopted whereby students were required to elect, in addition to the prescribed freshman Humanities course, three further courses for a total of nine credit hours, from at least two of the following groups:

I. Classical Civilization, Philosophy, Religion

II. Dramatic Arts, Fine Arts, Music

III. English or Foreign Language Literature

5. In the year 1957-1958 a new "Reading Course" appeared in the curriculum. This was designed to provide upperclassmen with opportunities to pursue programs of independent reading in areas of their choice.

6. Beginning with the current academic year, a new set of proposals pertaining to the sophomore natural science requirement became effective. The year-course in Evolution was dropped and replaced by a one-semester course in Organic Evolution, which most students are required to take if they do not choose the Chemistry-Biology sequence. In addition, Astronomy 21, Geology 21, and Psychology 21 were made additional one-semester electives. Table I shows how this new requirement is being satisfied by our present sophomore class.

Evaluation of the 1947 Curriculum

Generally speaking we find ourselves in agreement with many of the educational ideas presented in the Report of the 1945 Committee. That Report has raised many basic curricular issues which are as relevant today as they were fourteen years ago. We have considered them sufficiently important to re-think most of them in the light of what has happened under our "New Curriculum" and of new considerations that must now be taken into account. In doing so, however, we have come to the conclusion that new answers must be given to some old questions, especially the following:

1. How much of a student's work in college should be prescribed?

2. How defensible is it to make a sharp separation between the work of the first two years and that of the last two years?

3. How important is it that students be given common educational experiences throughout most of the first two years?

4. Should a sharp distinction be made between the work of "rite" and "honors" students?

Table I. Courses Elected by the Class of 1961 to Satisfy the Sophomore Science Requirement*

Course Combinations	Number of Students Electing
Chemistry 21, Biology 21	72
Chemistry 21, Chemistry 24	5
Chemistry 21, Biology 43	3
Chemistry 21, Evolution	7
Chemistry 21, Geology 21	1
Chemistry 21, Psychology 21	1
Chemistry 21, Astronomy 22	13
Chemistry 21, Mathematics 34	1
Chemistry 21, Geology 22	1
Chemistry 21, Astronomy 42	1
Evolution, Psychology 21	81
Evolution, Geology 21	18
Evolution, Geology 22	1
Evolution, Astronomy 22	8
Evolution, Biology 26	1
Geology 21, Geology 22	1
Chemistry 25, Biology 22	13
Chemistry 25, Astronomy 22	4
Psychology 21, Biology 22	1
Psychology 21, Geology 21	1

* These data were compiled shortly after the course changes for the second semester were entered on the students' registration cards. For this reason, there may be some slight inaccuracies.

5. What kind of provisions should be made for "general education" in a student's program of studies?

The nature of our recommended solutions to the problems posed by the above questions will be spelled out in greater detail in Part III of this report.

Only one further matter will be dealt with briefly at this point. How should the doctrine of "learning by doing" be evaluated? We endorse this if it means that we should get students actively involved in the educational process. We agree with the 1945 Committee that a college must aspire, whenever possible, to do more than simply transmit knowledge in a predigested form for the purpose of facilitating the passive absorption of this knowledge by students. Sound pedagogy involves an effort to stimulate students to discover what it means to acquire knowledge by independent effort, and by the techniques that scholars use to further their understanding of various subjects. But in taking this position, we do not mean to imply that students should never be expected to master facts, the acquisition of which often requires sustained effort. We do our students a real disservice when we allow them to assume that there is something disreputable about demanding mastery of certain bodies of knowledge--including "factual" knowledge. We should show less tolerance for those students who at times seem to be rationalizing their laziness by regurgitating the"regurgitation" argument. Let it be noted, however, that when it becomes necessary to introduce students to a considerable mass of factual material, this is best done when facts are, in Whitehead's words, "treated so as to illustrate the scope of general ideas." In this way the life of thought is preserved, even through those stages of a subject in which many involved details must be mastered.

III. PROPOSED CHANGES IN THE CURRICULUM AND IN EDUCATIONAL POLICIES AND PRACTICES

In our review of the curriculum we have found it necessary to give serious attention to a wide variety of considerations. Some of these require careful scrutiny whenever curricular re-examinations are undertaken. They concern the perennial problems of education that continue to vex us because of a gnawing sense of dissatisfaction with our attempts to solve them. Others arise from a new set of problems which the peculiar circumstances of our time have created for all levels of education in America. Periodic reviews of a curriculum inevitably reflect the temper of the times in which they are made. Ours is no exception.

There are several factors of a contemporary nature to which we have directed our attention. To discuss these is to delineate at the same time the context in which our thinking has taken place. We have, for one thing, taken as much cognizance as possible of the enormous amount of discussion and writing on the subject of proposed directions of change for all levels of education in this country. Education in America today has reached a highly self-conscious state, and is being subjected to widespread scrutiny and self-criticism. This is a healthy state of affairs and in the long run it is bound to have a salutary effect. It is at least forcing us to question time-honored practices, and it has the additional virtue of putting the supporter of the status quo on the defensive. This moment in our educational history is clearly not the time for complacent and apathetic repose.

Also salient in our thinking have been the critical problems created for higher education today by the steady increase in the number of young people seeking a college education. This problem promises to become very acute, and it will demand the utmost in the way of bold and imaginative planning if it is to be met adequately. It is this factor, among others, which demands that some attention be given to the economic implications of curricular planning.

Two additional matters have had to be reckoned with. The first is the widespread emphasis that is being placed on science--an emphasis that is often accompanied by the plea for more and better science instruction in our schools and colleges. The second is more local in character. It concerns the work of the committee that was created to formulate the blueprints of a new college.

Economic Implications of Curricular Planning. The imminent increase in college enrollments and the real possibility of a shortage of college teachers are two important reasons why the economic implications of curricular planning cannot be ignored. To do so would make a faculty which is given the freedom to formulate educational policy vulnerable to the charge of being irresponsible and shortsighted. On the subject of the prospective teacher shortage, some rather alarming statements have recently been made:

> "The debate over the appropriate preparation of college teachers is as old as graduate education itself. There has never been a time in the past 80 years when the question was not the subject of interest and argument.
>
> "The intensity of the discussion today stems from the acute need for more college teachers. In 1956, the National Science Foundation estimated full-time(or equivalent)faculty at 196,000. The Foundation estimates that by 1970 this figure will rise to 495,000 if we succeed in keeping pace with our needs. In the period between now and 1970 we must not only find enough new teachers to cover enrollment increases, but must replace all present college faculty who retire or move on to different fields. Considering these added burdens, it is possible that the total new faculty to be recruited by 1970 would be between 300,000 and 400,000.
>
> "How many new college teachers will actually be trained between now and 1970? Dael Wolfle predicted 135,000 Ph.D.'s, only half of whom would enter college teaching, would be produced between 1954 and 1970. The Association of Graduate Schools has estimated 235,537 for the same period. The latter prediction comes within reaching distance of estimated needs, and would be encouraging if it were not for the fact that in the past quarter century only 60 to 70 per cent of the Ph.D.'s from leading universities became college teachers. And most present-day observers believe this percentage will drop in the face of vigorous recruiting efforts from government and industry. That means that there will be a sharp decline in the proportion of college faculty members holding the Ph.D. One authoritative source predicted a decline from the current 40 per cent to about 20 per cent by 1970. Perhaps many institutions could absorb a higher student load with no increase in number of faculty. But even with allowance for such absorptive capacity, the task ahead is of serious dimensions." [8]

If further reasons were needed to arouse an interest in the subject of economy, it could be pointed out that a relationship exists between curricular decisions and the salaries a college can afford to pay its teachers. At least four important variables affecting faculty salaries are directly influenced by curricular policy decisions: (a) the size of the faculty; (b) the number of courses offered; (c) the number of courses students are required to take; (d) the "teaching load" of each faculty member. It seems to us, if for only selfish reasons, that we should try our utmost to affect these variables in such a way as to promote all possible economies which do not jeopardize our educational aims.

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[8] The Education of College Teachers- Summary of a Discussion by the Trustees of the Carnegie Foundation for the Advancement of Teaching. Reprinted from the 1957-1958 Annual Report of the Foundation, pp.3-4.

As we relate our thinking on matters of curricular policy to considerations of economy, certain questions are unavoidable:

1. Should we not engage in a thorough re-examination of our total course offerings with a view to reducing them to the smallest number needed to represent a given subject in a manner consonant with the aims of a liberal arts college?

2. Is it defensible to offer as many courses with extremely small enrollments on a yearly basis as we now do?

3. If no increase in the size of the student body is to be made, should we not resist any further increases in the size of the faculty?

4. Might it not be desirable, in the interests of long-range economy, to approve a modest increase in the size of the student body without a proportionate increase in the size of the faculty?

Questions of this sort are simply illustrative of the kind that have been generated by the times in which we live. They are questions, moreover which we have not been able to ignore.

The "New College" Plan. The work of our committee was paralleled for a time by that of the committee created to formulate the blueprints of a new college. Some of us were in touch with the early deliberations of that committee, and each of us has examined the published report of the "New College Plan." The main features of the "New College" curriculum, as we understand them, are as follows:

1. Despite the view expressed in the report of the New College Committee that courses should be "dethroned" as the "unit of knowledge," a system of offering courses* is nevertheless recommended, but with certain stipulations as to how this should be done. It is held that courses should be limited in number, and that no attempt should be made at inclusive coverage which, although appropriate in a university, is considered wasteful of teaching resources in a college. Courses should reflect both what faculty members want to teach and what is of interest to students. In addition, special emphasis is placed on the desirability of giving students the skills to learn subjects, or aspects of subjects, by means other than taking a course. In other words, subjects should not remain closed to students just because they are not represented by some course.

2. Students are to be given the maximum amount of opportunity for independent study. One means of achieving this is to limit the courses taken by students to three per term. A three-course plan should make it possible to structure courses on a more intensive basis as well as to provide more readily for collateral experiences in independent study. To help accomplish the latter, it is recommended that most courses, after the first term of the freshman year, be conducted by means of a combination of lectures and seminars. In many cases, presumably, only one or two lectures a week are to be

given in upperclass courses accompanied by the novel feature of seminars to be directed, as far as possible, by students.

It is proposed that training for independence should be given durthe first term of the freshman year by means of small-enrollment seminars, designed to teach the methodology of subjects in the Humanities and Social Science divisions and to explore limited subjects with a view to giving students an encounter with "a scholar working with materials which are alive for him with excitement, perplexities, alternatives, problems, unexplored possibilities."[9] In these seminars students are to be shown how an instructor works and how they can work in using a discipline.

3. No provision is made for departmental organization. This is justified on the grounds that departmentalism, along with a course system, is responsible for an undesirable proliferation of courses and also contributes to unhealthy rivalries between teachers who may be in the same or different departments.

4. The practice of prescribing courses for all students is looked upon with disfavor. It is argued.."that we cannot, and should not, settle what should be required for all. Vital education requires an open market."[10] Despite this antipathy for prescriptive practices, however, it is recommended that a year-course in science be required of freshmen.

5. Diversification of students' educational experience is to be assured by the device of requiring all students to elect four courses in two different humanities, an equal number in two different social sciences, and three courses in natural science.

6. Programs of concentration are to be developed on an ad hoc basis, with students to be given the freedom and responsibility of working out a plan of studies that will meet with the approval of a faculty committee. Concentration may be within a recognized discipline or may be interdisciplinary in character. In either case, a student will be expected to take one "field examination" in the junior year and two in the senior year. Only one of the latter, however, is to be required if a student elects to write a thesis. Field examinations are to cover limited subjects, but their scope is to be larger than the content of any one course.

7. A midwinter term, four weeks in duration, is proposed as a means of bringing students "together in common intellectual enterprises." During this term only two courses are to be given to the entire student body, one of which "will deal with some aspect of the Western cultural heritage; the other with one or another of the great non-Western cultures."[11]

8. Foreign language literature courses are to be offered, but students are not to be given credit for elementary language work.

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9. The New College Plan, p.18. 10. Ibid., p.8 11. Ibid., p.10.

9. A grading system involving the three categories of "fail," "satisfactory," and"distinction" is recommended.

Many curricular ideas suggested by the New College Committee seem sufficiently promising to be worthy of an experimental test, particularly in a new setting. Some of them are similar to those which have influenced our thinking, although our proposals, for the most part, have taken a different form. We see virtues, for example, in a calendar that provides for a short midwinter term, but we differ with the New College Committee as to how such a term might best be used. Likewise, we see clear advantages in not expecting students to carry an excessive number of courses at any one time. We believe, however, that a reduction to three courses per term is too drastic for Amherst College and could easily result in an insufficient amount of diversification in a student's program of studies. There is no disputing the point that students should be able to learn things without "taking courses,", but courses when properly conceived and taught, are still a good way of structuring the conditions under which a variety of things may be most effectively learned. It may be well to note,in this connection, that a commitment to a course system is not a commitment to any monotonous uniformity in the way subjects are taught in college. Courses, after all, may be developed in a wide variety of ways.

On the subject of departmentalism, we are fully aware that, under certain circumstances, it may be an educational liability rather than an asset. This is particularly true (a) when the interests of departments are placed above that of the college as a whole, (b) when matters of educational policy are decided on the basis of their effect upon a given department rather than in terms of their broader educational effectiveness, (c) when offering a large number of courses with heavily weighted departmental interests or very specialized objectives makes it necessary to keep out of the curriculum a number of more central and important courses that might otherwise be provided. There is no reason, however,why a college should necessarily dispense with the advantages to be derived from departmental organization simply because this system lends itself to varied kinds of abuse. Rather, a college should be continually vigilant to prevent departmentalism from becoming a liability.

The proposal that "freshman seminars" and upperclass, student-directed seminars be offered cannot properly be evaluated without some experimental test of their effectiveness. The freshman-seminar idea for the humanities and the social sciences is, to be sure, one way of guaranteeing that all faculty members will be teaching freshmen the substance of what they want to teach. This is not true when a prescribed course in each of these broad fields is set up which may, unless the danger is guarded against, result in a number of freshman sections being taught by those who have neither the interest nor the competence to do an effective job. On the other hand, we are not all sure that seminar experiences should come in the freshman year, and particularly in the first term. Certainly it is not necessary to go to the extreme of offering a wide diversity of seminars to freshmen on the grounds that this is the only way to avoid the shortcomings of freshman "survey courses." It should be possible to develop at least a few courses in both the Humanities and Social Science divisions which could unite more central interests than would the contemplated seminars at "New College" and at the same time give students an encounter with an instructor who creates an atmosphere of excitement about what he he is doing.

The student-directed seminar for upperclassmen is certainly worthy of experimental test. We recommend that this idea be tried out in some courses at Amherst, in consultation with a member of the New College Committee, in order to assess its value as a teaching device. That committee's plans for concentration seem quite sound, particularly in a college with a small faculty and no departmental organization.

The Contemporary Emphasis on Science. We are being told that America needs more scientists and that this need must be met if we are to survive. Amherst College, with good resources for science instruction, is fortunately in a position to make a significant contribution to the training of future scientists. We believe that the sciences should continue to be strongly represented in our curriculum, but we believe also that the present situation does not call for any drastic change in our policy of not permitting excessive specialization in science at the expense of other important concerns in a liberal arts college. It would be a mistake to permit students interested in science to elect a one-sided program of studies with heavy emphasis on scientific subjects. To do so would require a return to an earlier practice of granting both the B.S. and the A.B. degree. This we do not favor. Amherst College should remain an institution in which a student is challenged to develop all the attributes of a liberally educated man, rather than one in which he is given the opportunity to become a narrowly trained specialist, scientific or otherwise.

We hope enough has been said to underscore the point that no set of proposals for curricular change can properly be understood without an awareness of the context out of which they emerge. We have taken a close look at the ideas underlying our curriculum and at our more general educational policies and practices, in the light of any new considerations suggested by contemporary conditions. We were aided,to some extent, by the reactions of students to their educational experiences at Amherst. Almost 200 hundred students of the class of 1958 filled out an extensive questionnaire which gave them the opportunity to express viewpoints on many matters of curricular and general educational policy. This was complemented by discussions carried on by one member of our committee with the Student Committee to the Faculty.

The results of our efforts at re-examination are to be found in a variety of proposed directions of change, to a discussion of which we now turn. Our recommendations are presented under two broad headings: (a) proposed changes in the curriculum; (b) proposed changes in educational policies and practices.

A, Proposed Changes in the Curriculum

It must be made clear at the outset that the content of any set of curricular proposals is strongly influenced by the answer given to one basic question: How much of a student's course work in college should be required and for what purposes? We have subjected the issue of "curricular requirements" to thoroughgoing analysis and, despite some differences of opinion, have arrived at the following conclusions:

1. We believe that certain basic courses should be required of all freshmen. A required freshman program, in spite of some disadvantages, can successfully perform a delicate educational task. On this point we are in agreement with the 1945 Committee.

2. We are willing to endorse only a minimal use of course-prescription after the freshman year. We believe that a student should continue to diversify his course of study after the freshman year, but we favor reliance on a distribution requirement to achieve this objective.

3. Every student, we believe, should be required to pursue a program of concentrated studies in one, or occasionally, two fields.

4. We support the continuation of both a foreign language and physical education requirement.

Each of these requirements is discussed below in considerable detail. This discussion is preceded, however, by a treatment of three proposals that have influenced our recommendations pertaining to requirements. These are the proposals for a new academic academic calendar, a four-course plan, and the abolition of our variable credit-hour system.

A New Academic Calendar

We have subjected three types of calendar to critical analysis: (a) our present two-semester calendar; (b) a calendar consisting of three ten-week terms, associated with a three-course plan for each of the terms;[12] (c) a novel calendar providing for two thirteen-week terms (plus examination periods) in the fall and spring separated by a five-week midwinter term. The last calendar has impressed us as containing sufficient promise to merit its strong recommendation to the faculty. The distinctive feature of this calendar is the short midwinter term. We favor this especially because it makes it possible to derive greater educational benefits from a portion of the year which, under existing conditions, cannot always be put to the best use. If our plans for the use of this term are approved, students will be introduced to new modes of learning and teaching and given what we consider to be an important kind of variety in the course of a year's studies.

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[12] This calendar was put into effect at Dartmouth College last fall and has been used by Goucher College for many years.

It is not possible as yet to set any fixed calendar dates for operation under our proposed three-term plan, owing to uncertainties about the dates of our commencement exercises. For some time it has been considered essential that our commencement exercises follow those held at the University of Massachusetts, in order to permit the use of their dormitories to house alumni and guests. Since there is no definite information as to when the University will hold commencement exercises in the future, definitive action on specific calendar dates must be deferred. When such action is taken, however, we strongly recommend the calendar given in Table II--or one very similar to it. This calendar brings one term of work to a conclusion before the Christmas vacation period begins. We believe this to be highly desirable.

Table II. Recommended Dates for the Proposed Three-Term Calendar(based on 1958-1959 dates)

Term 1. September 11 to December 13(examinations from December 15-18).

Term 2. January 5 to February 7(examinations normally on the last day or two of the term.

Term 3. February 8 to May 23(examinations from May 25-28)

Spring vacation: March 22 to April 5
Commencement: Sunday, June 7

A skeletal sketch of our ideas for the use of the three-term plan is presented in Table III. Four courses are provided for in terms one and three throughout the four years. Two of the courses in the freshman year are eighteen weeks long. The following activities are scheduled for the midwinter term: (a) a maximum of two courses for freshman and sophomores; (b) one course under the direction of the "major" department for juniors; (c) independent study in the major subject for seniors. Much of what follows in this report will deal with the detailed features of this general plan.

In summary, we see in the three-term plan an opportunity to provide a change of pace in the activities of the academic year. Students will be given some time during each year to work intensively in one or two areas. The plan presents a challenge to each department to introduce some common activity for all majors during the midwinter term of the junior year. In addition, it sets aside a portion of the senior year for undivided attention to independent study in the major field.

Table III. Outline of Proposed Use of the Three-Term Calendar

Freshman Year

Term 1(13 weeks)	Term 2(5 weeks)	Term 3(13 weeks)
18-week course		
	18-week course	
13-week course		13-week course
"		"
"		"

Sophomore, Junior, and Senior Years

Term 1(13 weeks)	Term 2(5 weeks)	Term 3(13 weeks)
13-week course	See below for proposed use of term 2	13-week course
"		"
"		"
"		"

Term 2 Activities for Three Upperclass Years

Year	Proposed Activity
Sophomore	No more than two half-courses or one full course.
Junior	One course under the direction of the major department.
Senior	Independent study in the major subject.

A Four-Course Plan and Related Considerations

In 1950 Amherst College adopted a variable credit-hour system and thus terminated a brief experiment with the four-course plan instituted in 1947. This action has had the effect of increasing the number of courses carried by students to an average of five per semester. Indeed, many students now take more than five courses at one time.

When the variable credit-hour system was first recommended to the faculty, the following case was offered in its defense:

1. Under a four-course plan, some courses scheduled three and others four class meetings per week. It was assumed that students would prefer the former type of course.

2. A four-course program was considered too confining for honors students and some non-honors students.

3. A number of courses, it was argued, did not make the increased demands upon a student commensurate with a shift from a five- to a four-course plan.

4. It was recognized that a credit-hour system would have the effect of requiring many students to carry more than four courses. This was favored on the grounds that it would make it a little more difficult for lazy students to be lazy.

We have set the above objections against the arguments in favor of a four-course plan and have become convinced that the latter are more persuasive. We recommend, therefore, the adoption of a four-course plan.[13] Such a plan has a number of virtues. For one thing, it makes it unnecessary for a student to disperse his intellectual efforts over too many separate enterprises. It also reduces the extent to which work in any one course may interfere with that done in another and increases the opportunity for more intensive work in courses, thus providing a more effective means for encouraging students to engage in a certain amount of independent study. A further advantage of the four-course plan is the possibility it affords of effecting some economies. In a college of one thousand students, for instance, a one-course reduction in the students' course-loads would result in one thousand fewer course enrollments during any one term.

In relation to the four-course plan we are proposing, we have several recommendations to make:

1. We urge that courses be weighted in terms of unit values rather than credit hours. Our plans require some such device for two reasons: first, the courses we have planned for the freshman year are not equal in the amount of a student's time to which they may lay claim; second, we have made provisions for what may be called "half-courses" in the

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[13] Under our proposed calendar this would apply only to the fall and spring terms, inasmuch as we contemplate an even more drastic reduction in courses during the midwinter terms.

midwinter terms of the freshman and sophomore years. As a weighting device we reject the credit-hour system primarily because it has become associated with a view which we cannot endorse, namely, that education is in some way related to the number of times a student is expected to attend class. A credit-hour system, moreover, would be cumbersome to use under our general plan, since it would require that most courses offered in the two thirteen-week terms be designated as three and one-half credit-hour courses.

Our ideas on the use of unit values may be briefly summarized. A course with a unit value of "one" is entitled to one-fourth of a student's time in the fall and spring terms and all of his time during the midwinter term. Fractional-unit courses--which appear very infrequently in our total plan-- are to be interpreted on the basis of this norm. For instance, in terms one and three, a "one-half" unit course would be entitled to one-eighth of a student's time, and a"one and one-half" unit course to three-eighths. The latter type of course we have confined to the freshman year; the former, to the freshman year and the midwinter term of the sophomore year.

2. With the exception of some courses in the freshman year and the midwinter term of the sophomore year, we strongly recommend that only one-unit courses be permitted. It is only by adhering to this practice that we shall be able to maintain a four-course plan during the fall and spring terms and avoid the confusion which has resulted from our variable credit-hour system. We realize that what we are proposing makes no provision for the one- and two-credit hour courses now being offered.[14] These are listed in Table IV. We hope that portions of the material around which these courses have been organized may be incorporated into our course structure in other ways. But even if some of these courses may have to disappear entirely, we still think this would be better than to sacrifice the advantages of a four-course plan.

3. We recommend that one unit of credit be given for the work done during each of the four midwinter terms.

4. Other than setting upper limits on the number of class meetings that may be scheduled in a given course, depending on its unit value, we recommend that the concept of a "course" be divorced from any fixed number of class meetings. The 1945 Committee offered some sound advice on this subject:

> "In the application of the four-course plan we have in mind a maximum of flexibility as regards the number of class meetings a week, or how many of them shall be class meetings and how many laboratory or seminar meetings. Each course would be designed to take one-fourth of a student's time. How that time is to be used is a matter for the instructor and the department concerned to determine. In general we believe that, particularly in many advanced courses,

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[14] In a unit-value system, these would be roughly one-fourth and one-half unit courses.

Table IV. One and Two Credit-Hour Courses Listed in the Catalog

A. One Credit-Hour Courses

1. Introduction to the Analysis of Economic Problems
2. Michelangelo
3. Andre Gide
4. Marcel Proust
5. Thomas Mann
6. Franz Kafka
7. German Poetry of the Twentieth Century
8. Metaphysics
9. Marriage and the Family
10. Introduction to the Analysis of Data and Design of Experiment
11. Hispanic Authors
12. Issues of International Politics

B. Two Credit-Hour Courses(exclusive of freshman courses)

1. Latin Poetry: Lyric and Pastoral
2. Creative Writing
3. Problems in Modern European Art: The Nineteenth Century
4. Problems in Modern European Art: The Twentieth Century
5. French Lyric Poetry
6. Poetry Since Baudelaire
7. Regional Geology and Geography of the Americas
8. Regional Geology and Geography of the Eastern Hemisphere
9. Minerals in Modern Affairs
10. Faust-Part I
11. Faust-Part II
12. Mozart and the Classical Style
13. Advanced Laboratory in Physics

C. One to Three Credit-Hour Course

1. Special Topics in French Literature

D. Two to Four Credit-Hour Course

1. Advanced Readings in Spanish Literature

E. Reading Courses

These may be taken for varying amounts of credit.

> more emphasis should be placed on independent work by the student and less on classroom hours. Under a four-course program many of these courses might well be organized(as they now are) on the basis of three regular class meetings or one two-hour seminar meeting a week."[15]

We are in complete agreement with this statement. Certainly we ought not to permit ourselves to become engaged in any serious debate on the question of whether a course should schedule three or four class meetings per week. Good education is dependent upon far more important considerations. A course should be viewed primarily as being entitled to a certain portion of a student's time. How this time is to be used, whether in or out of class, is a matter for each instructor to determine. All that we need to be concerned about is that no course demand more than its proper share of a time in a student's academic work week. When unfair demands of this sort are made in any course, a student will either have to devote an unconscionable amount of time to his total academic work or neglect other courses taken at the same time.

Regarding the upper limit of scheduled class meetings in courses, we suggest the following regulations: for one-half unit courses, two meetings; for one unit courses, four; and for one and one-half unit courses, six.

5. We recommend that thirty-five units be required for graduation. This means that a student would normally carry nine units of work per year, but that only eight units would be necessary during one of the four years. Hence, during at least one term it would be possible for a student to schedule only three courses. We recommend that students be encouraged to do this in the senior year, in view of the plans we have in mind for concentration programs and honors work. If a student fails a course, the thirty-five unit requirement has the advantage of making it possible for him to remove the deficiency without scheduling five courses or going to summer school.[16]

6. At the present time we require students to carry a minimum of fourteen credit hours of work during a semester. We favor this type of policy and recommend that, in our plan, students be required to elect a minimum of three units of work during terms one and three. In addition, we recommend that all students be in residence during each of the four midwinter terms unless the Dean approves exceptions for educational purposes.

The Freshman Year

No subject has been discussed with greater thoroughness in our deliberations than has the program of the freshman year. This attention seems entirely warranted in view of its critical importance in the curricular model which we have developed. It is during the freshman year that many basic attitudes and patterns of behavior are established, which may persist throughout a student's career in college. This is the time when basic foundations may be laid for a student's subsequent work.

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[15] Kennedy, Ibid., p.46. [16] One further advantage of the above recommendation will become apparent in our discussion of the foreign language requirement.

Therefore, any plan for the freshman year must be carefully considered and devised in such a way as to help achieve, among other things, the following objectives:

1. To develop in the student an ability to engage in mature forms of intellectual analysis and aesthetic appreciation.

2. To engage the student in the study of several basic disciplines selected in such a way as to be representative of the major concerns of a liberal arts college. (We conceive these concerns to include, especially, an awareness of the cultural tradition of which the student is a part, an understanding of the functioning of the society in which he lives, and a more accurate conception than he may previously have acquired of the nature of scientific inquiry).

3. To create a concern for careful writing and critical reading, and to develop skills in both of these areas.

4. To provide opportunities for the study of a foreign language.

We believe that a planned course of studies in the freshman year provides the best way to achieve these objectives.

One special advantage of a prescribed freshman program is the possibility it affords of giving freshman a careful introduction to the meaning of mature forms of intellectual inquiry in a variety of disciplines. Those who teach freshmen are especially well qualified to appreciate the importance of this point. They would doubtless agree that when students first come to Amherst, many of them may never have had occasion to subject an idea to thorough or genuine criticism. They may not have been invited often enough to engage in a mature discussion of a book or to examine the whole structure of an idea or an argument. They may lack any accurate conception of the nature of scientific inquiry, and indeed, may have extreme misconceptions regarding it. A freshman is often the naive captive of received opinions. He has become accustomed to memorizing and repeating the words of textbooks and teachers. Under the pressure of fighting for acceptance to college, he has come to assume that knowledge is merely the sum of machine-tested skills. What is worse, he may not even be aware of the fact that these skills are not critical skills. Above all he may be unaware of what it means to assume intellectual responsibility for what he professes to know, to understand, or to believe. Rarely has he been asked to consider what knowledge is. This we take to be the state of many freshmen; and this is the general problem to which the freshman program should give serious attention. If a prescribed course of studies can do much to solve this problem, then very little further needs to be said in support of it.

The substance of our viewpoints and recommendations concerning the freshman year will be dealt with below under a variety of headings. Under the last of these, we shall discuss some of the general ideas we have developed with respect to course-prescription and shall offer some proposals for changes in the way this practice is applied.

Recommended Required Subjects. We recommend that we continue to require work in the subjects now included in the freshman program. These subjects are English Composition, History, Humanities, and Science. The aims and objectives of the recommended courses in these subjects are described in Appendix I.

A decision as to what ideally to include in a prescribed program is not an easy one to make, particularly when course prescription is confined, for the most part, to the freshman year. When only four courses are to be prescribed, it is obvious that not everything we hold to be important can be represented. Under these conditions, we are faced with the necessity of making a choice among a number of possible alternatives. We believe this choice should be made in such a way as to include courses which promise to have the highest degree of general value, and which in their totality can best fulfill the previously stated objectives for the freshman year. We do not believe, however, that any course which is chosen should be viewed as being necessarily indispensable to the education of all students and irreplaceable by any conceivable alternative.

Alternate Plans for the Freshman Year. Given the possibilities of our proposed academic calendar, there is more than one way to devise a freshman program built, for the most part, around four required courses. We have considered three plans which are given in Table V. Each of these plans has been formulated to provide for less course-load pressure and fewer classroom hours in the freshman year than is now the case. The primary defect of the present freshman program is that it requires students to carry six different subjects(Calculus, Physical Science, History, Humanities, English Composition, Foreign Language or an Elective)and to attend more than twenty class meetings per week. There is also a Physical Education requirement in the freshman year. This program elicited a negative reaction from Professor Chandler, a former member of the Amherst faculty, even before it was put into effect. He wrote:

> "The recommended program would tend to emphasize too much the work that a student does or has done for him in the classroom, and it would do this at the expense of work done independently by the student outside of the classroom. I believe that this is a step in the wrong direction. The essential point of the Long Range Policy Report was not, it seems to me, to increase the amount of time spent by the student in a classroom but rather 'to learn by doing,' or 'to acquire and learn to use skills through the solution of problems.' This purpose cannot be achieved unless the student is required to do a large amount of independent work outside the classroom."17

We are in sympathy with this objection and have felt that the least we could do would be to find some way to meet it.

Plans B and C in Table V have certain features which we have found very appealing. We are not recommending either of them, however,

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17. Ibid., p.195.

Table V. Three Plans for the Freshman Year

	Term 1	Term 2	Term 3
Plan A	Humanities (1)	Humanities (½)	
	18-week course		
		History (½)	History (1½)
		18-week course	
	Science (1½)		Science (1)
	Elective (1)		Elective (1)
	English Composition (½)		English Composition (½)
Plan B	Humanities (1)	Humanities (½)	
	18-week course		
		History (½)	History (1)
		18-week course	
	Science (1)		Science (1)
	Elective (1)		Elective (1)
	English Composition (1)		English ~~Composition~~ (1) LITERATURE
Plan C	Humanities (1)	Humanities (½)	
	18-week course		
		History (½)	History (1)
		18-week course	
	Science (1)		Science (1)
	Elective (1)		Elective (1)
	English Composition (1)		Choice of: (a) English Literature (1) (b) Philosophy (1) (c) Religion (1) (d) Non-Verbal Arts (1)

because they do not make the kind of provisions for teaching English Composition held to be essential by the members of the English 1-2 staff, as was pointed out to us in a written communication from the English 1-2 staff in which stress was placed on the following:

> English 1-2 cannot effectively accomplish its aims unless it be given for most of the freshman year. To restrict a course in English Composition to thirteen weeks is to imply that writing can be taught as a subject quite separate from the student's intellectual development and general maturity over the year. Here, where composition is taught not as a subject but as an action, such a separation would be grossly misleading to all concerned. English 1-2, set off as a subject ending at the middle of the year, would be a most strange and isolated experience for the freshmen. The staff of English 1-2 therefore ask that they be given a college year of two terms, from September to May, in which to teach composition.

Plan A is the only one that schedules more than one term of work in English Composition. This therefore is the plan we recommend.

The Recommended Freshman Plan. There are several features of Plan A that need further comment. Eighteen-week courses are scheduled in Humanities and History. We recommend that a final examination be given in the former course at the end of the midwinter term, and in the latter course at the end of the spring term. Each of these courses is to occupy one-half of the student's time during the midwinter term. The Humanities course may claim one-fourth of his time during the first term and the History course, three-eighths in the spring term. This allocation of time is indicated by the unit values enclosed within parentheses in Table V. Under these conditions, it should be possible to offer a more intensive course in Humanities than is now the case. As for the History course, although the time-span is reduced to eighteen weeks, students may be expected to give it about as much total time as the present year-course may demand. The History course, however, will undoubtedly have to be reorganized so as to engage the student in more intensive work done outside the classroom than is now possible. Indeed, we highly recommend this procedure. We also consider it very desirable for the course work in Humanities and History to be organized in such a way as to provide for some degree of relatedness between them during the midwinter term when the two courses overlap.

We are recommending the continuation of a freshman "science" course consisting of work in mathematics and physical science. The unit values assigned give the science course the right to three-eighths of a student's time in the fall term(with a maximum of six class meetings and a laboratory session) and one-fourth of the student's time(with a maximum of four class meetings and a laboratory period a week) in the spring term. We hope this allocation of time will be conducive to an innovation whose careful consideration we strongly urge. We have been using the single label of "Science 1-2" for some time to cover work offered in two different subjects. This seems quite appropriate as far as

Science 1 is concerned, for in the first semester there is a very profitable interplay between the work done in mathematics and physical science. But considerably less of this interaction takes place in Science 2. In the second semester, students for the most part are being given two somewhat unrelated courses under a single label; yet we still continue to report a single grade for Science 2. This, together with other considerations, has led us to make the following proposals:

1. We recommend: (a) that work in mathematics be confined to the first term and that an increased amount of time be devoted to it; (b) that a separate grade be reported in mathematics at the end of the first term; (c) that one unit of credit be given for the satisfactory completion of work in mathematics.

2. We recommend: (a) that the spring term be devoted entirely to physical science; (b) that a separate grade be reported in physical science, preferably a definitive one only at the end of the spring term; (c) that one and one-half units of credit be given for the satisfactory completion of work in physical science taken in the fall and spring terms.

We have discussed the above ideas with members of the Mathematics and Physics departments, and understand that they are prepared to give them serious consideration.

Our decision to recommend the continuation of our freshman science course was arrived at only after considerable thought and discussion. There is little question that this course has been well-conceived. On the other hand, the fact that Amherst College is virtually the only liberal arts college that requires this type of course of all students undoubtedly accounts for the emphasis placed upon it in the conceptions of the Amherst curriculum generated outside of our community. This course very **likely has a selective** influence in determining what kind of students will seek admission to Amherst College as well as in determining which of those who apply are eventually admitted. There are some, indeed, who fear that our freshman science requirement has the effect of reducing the number of students at Amherst who are highly gifted and strongly interested in creative pursuits of a non-scientific variety.

If the above considerations are approximately correct, they justifiably become a cause for concern. They do not seem to us to be sufficiently compelling, however, to warrant a drastic change in what appears to be a theoretically sound mode of structuring a science requirement in a liberal arts college. Some of the possible disadvantages of this requirement might be overcome if the somewhat less rigid mode of implementing our prescribed program,which is recommended later in this report, is adopted.

We endorse a required English Composition course because of the obvious importance of writing skills. It is doubtless a common complaint in all colleges and universities in the country that many students do not write well. Quite often the complaints center on such things as the inability of students to spell and punctuate correctly, to paragraph properly, to make orderly transitions from one paragraph to another, or to understand the mysteries of the dangling participle. There is something lamentable about permitting students to graduate from a liberal arts college while they continue to exhibit deficiencies of this sort. It is even more lamentable when students have not learned the art of putting ideas into words, sentences, and paragraphs in such a way as to make these clearly intelligible to a reader. The necessity of learning how to write well must be made clear to a student on the first day he begins college classes, and he should never be permitted to lose sight of this until he graduates. Whatever his special interests and skills may be, each student should be expected to communicate ideas effectively and to do so according to the canons of good form.

We view the English Composition course as the first step to be taken in ridding students of poor writing habits. We asked ourselves, however, whether something more is needed. The suggestion has been offered that a remedial writing course be established, to which students should be referred at any time in their college careers when faculty members detect marked deficiencies in their writing. We have given this proposal due consideration and have decided not to recommend it. About as far as we care to go in this direction is to suggest that consideration be given to the possibility of requiring students who still show deficiencies in writing at the end of the freshman year to continue further work in writing, on a non-credit basis, until an adequate level of competence is reached. Other than this we have only two recommendations to make:

1. Support should be given to any effort aimed at getting from prospective freshmen a sample of their writing ability, obtained under controlled conditions. If such a sample could be made available, we believe it should be taken into account in admitting students. It should not normally be necessary for a college to teach a number of elementary things about writing that should have been learned in either the elementary or secondary schools.

2. We cannot expect the English Department to carry the complete burden of fostering the development of good writing ability. For this reason we believe that more stringent demands for clear and careful writing be made on students in all courses, especially in those in which students are asked to write papers. Writing should be a four-year concern in which all faculty members display an active interest. The ability to write well is something that develops gradually and is shaped in a variety of ways, depending upon the context in which it demanded and the purposes for which it is used. Pressures for good writing should be exerted on all fronts. Students who make the absurd claims that a course in philology, for example, is not also a course in writing, and that nothing but philology matters, should be instructed otherwise. Faculty members should return any written work that is slovenly and poorly constructed, and demand that it be rewritten. We should make it clear that writing is the appropriate concern in any course, and that an instructor has a right and an obligation to emphasize its importance, whether in a philology course or in those courses that we actually teach at Amherst.

Foreign Language Requirement. There remains to be considered at this point, as far as the content of the freshman program is concerned, provisions for work in foreign language.[18] Amherst College has had a long tradition of requiring students to demonstrate some degree of competence in the use of a foreign language. We believe this tradition should be maintained, but we also recommend that modifications be made in the nature of our foreign language requirement and in the manner in which it is implemented.

First, we favor a foreign language requirement in which the emphasis is placed on the use of the language in the study of literature, rather than primarily on the development of reading and oral-aural skills. This shift of emphasis is needed to bring our requirement more in accord with what should properly be expected of college students. Basic foreign language skills should ideally be learned in elementary or secondary schools. We believe these skills should be used in college to study the literature of a foreign language. We recommend, therefore, that all students be required to elect a foreign-language literature course.

Second, we believe it highly desirable to place an upper limit on the number of courses that a student may be permitted to elect for credit in preparation for admission to a literature course in a foreign language. We recommend that this upper limit be set at two courses. We favor this proposal rather than the following alternatives which we have considered:

> (1) That only those students be admitted who have sufficient command of one foreign language to make it unnecessary to give college credit for work done at the pre-literature level.
>
> (2) That students who are not ready at entrance to elect a literature course be expected to pursue studies on the pre-literature level without college credit until they are equipped to elect a literature course.

Before long, however, colleges like Amherst should begin to exert pressure to get students to study one foreign language in secondary school for at least three or four years, in order to eliminate the need to give as much instruction as we now do on the pre-literature level. Perhaps by 1964 students should be allowed to take only one course for credit at the pre-literature level, if they have not satisfied the language requirement; and by 1966, or thereabouts, none at all.

In recommending the policy that pressures be applied to get prospective students to study a single foreign language in secondary school for three or four years, we are fully aware that any success we have in exerting pressures of this sort will not necessarily be accompanied by uniform results. There are two reasons for this. First, the quality of instruction is not the same in all secondary schools; second, students differ rather markedly in their ability to learn a foreign language.

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[18] We recommend the continuation of a freshman physical education requirement, but we shall deal with this later when other aspects of our physical education program will be considered.

It is of some interest to note the relation between the number of years a foreign language was studied in secondary school by the members of the Class of 1957 and the number of courses required in college to satisfy the foreign language requirement. Data on this relationship are presented in Table VI. It shows that more than half of the students with four years of preparation satisfied our requirement at entrance, whereas this was true of only one-fifth of those with three years of preparation. The fact that a number of students in both categories had to take one or two courses at Amherst to satisfy our present requirement may well have been the consequence of oral-aural deficiencies. If we were to abandon our present oral-aural requirement, it is conceivable that many students with three or four years of preparation in one language could be admitted to a literature course when they enter.

Table VI. The Relation Between the Number of Years a Foreign Language was Studied in Secondary School by Members of the Amherst Class of 1957 and the Number of Courses Required in College to Satisfy the Foreign Language Requirement

Number of Years a Foreign Language was Studied in Secondary School*	Number of Students Who Satisfied the Foreign Language Requirement:					
	At Entrance	After one course	After two courses	After three courses	After four courses	Total
None			9	10	1	20
One		3		1	1	5
Two	7	35	32	4		78
Three	18	59	13			90
Four	25	13				38
Total	50	110	54	15	2	

* This refers to the number of years that the foreign language in which the college requirement was satisfied had been studied in secondary school. Some students study one language in secondary school and begin a new college in college. This is true, for example, of the twenty students in the first row of numbers.

__Third__, we believe that the possibility of offering foreign language instruction at Amherst during the summer is worthy of careful exploration. If we could make such instruction available during the summer, then prospective freshmen who lack skills in a foreign language might be encouraged to take advantage of it. Perhaps something could be worked out in this regard on a four-college basis(possibly to include courses in elementary mathematics as well).

Fourth, we hope the adoption of a foreign language literature requirement will be accompanied by changes in the procedures used in teaching the modern foreign languages at the pre-literature level. We recommend that less time be spent in drill work conducted for the purposes of developing oral-aural proficiency. A certain amount of the latter is undoubtedly desirable in teaching a foreign language in the early stages, but we question whether it should be given as much stress is it now receives.

Fifth, in recommending a foreign language literature requirement, we are notsuggesting that all classroom work, or even a major portion of it, be conducted in the language involved. This does not impress us as being a necessary criterion of a good foreign-language literature course. Certainly in such courses students should be expected to read works in the original language, and the necessary steps should be taken to see that this is done. But the main emphasis in these courses--at least for the majority of students--might well be placed on issues of form, content, and criticism. There is no good reason why an instructor should not feel free to speak about these in English, if he considers this to be the most effective means of accomplishing his ends. Those students who wish to utilize a high degree of language proficiency--particularly oral-aural skills--could be accomodated in some courses conducted completely in the foreign language.

Sixth, one implication of our proposals should be noted. We believe their adoption will gradually result in an increasingly larger use of our teaching resources in the foreign language field for more advanced instruction, and less and less for work at the more elementary levels.[19]

Further Recommendations Concerning the Freshman Year. So far we have discussed the course-content of the freshman year. Several other important matters pertaining to the freshman year remain to be considered. Our views on these are reflected in the following recommendations:

1. If sound educational reasons may be advanced for so doing, we recommend that a student be excused from at least one of our required freshman courses, or in some instances be permitted to defer the satisfaction of a requirement to the sophomore year. For some small percentage of ~~these~~ STUDENTS it may be desirable to show somewhat more flexibility than we now do. We do not, however, favor excusing students from any requirement if the intention be to cater to those who are not interested in coming to terms with courses that impose exacting demands. If we make exceptions to any of our requirements, we should most certainly do so for reasons other than this one. Education at Amherst should be demanding

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[19] See Appendix II for a fairly complete analysis of the foreign language studies by members of the Class of 1957 while in secondary school and in college.

of the best intellectual efforts of which students are capable. We need not be apologetic about announcing this as our firm policy and acting in accordance with it.

To put this proposal into effect will require the designation of an appropriate committee with the necessary jurisdiction--perhaps the Admissions Committee, including the Dean of the College. We believe that the matter of excusing a student from a freshman requirement should be taken into account when decisions are made on the admissions front. We favor flexibility at this point to insure that we will not be forced to reject some highly gifted students having special interests and aptitudes. We should like to add, moreover, that what we are proposing should be tried on an experimental basis, for a period of three years, after which the whole matter should be reviewed in the light of our experience.

2. We recommend that our present practice of offering work in section meetings be continued. In some instances, it would be well if the sections could be reduced somewhat in size. If we are to reap adequate benefits from a prescribed course of studies in the freshman year, it is very important that work be carried on in small sections to insure that students have the opportunity, and indeed the obligation, to scrutinize the structure of ideas in the subject they are studying. It is crucial that a student learn to ask himself the right questions; but he cannot very well be taught to do so unless the teacher, operating at close quarters, shows him how. This is of special importance in the early stages of his development as a student.

3. We recommend that appropriate sectioning procedures be used in any freshman course to accomodate to the fact that some students come better prepared than others for advanced work in the required areas of study. Adjustments of this sort may soon become necessary, for example, in teaching physical science to freshmen. The Physical Science Study Committee in Cambridge, is in the process of developing ideas and course materials for better secondary school instruction in physical science. It is quite possible that we will very soon begin to get students who will have been introduced to physical science by procedures similar to those now used in our freshman course. It is quite clear that accomodations to this development will have to be made. Similar adjustments will doubtless be necessary in other courses. In any implementation of a prescribed course of studies, we can ill afford to ignore the secondary school preparation of our students and to show no concern about making adjustments to individual differences. It must always be our goal to build upon the foundations our students bring and to avoid making them cover familiar terrain.

4. We recommend that every effort be made to eliminate one undesirable feature of our present freshman year. Freshmen have reported to us that they are put through such a continuous round of examinations and quizzes that they have little time for private reading or deriving any enjoyment from their studies. We hope that our recommended program for the freshman year will do much to improve this situation. But even this program can be abused, if some concern is not manifested in preventing the freshman year from becoming the kind of "grind" that discourages more than it fosters educational interests and growth.

5. We recommend that our present methods of computing a four-year college average be replaced by the computation of a separate freshman-year average and a cumulative average for the remaining three years. The grades a student receives in his freshman year deserve to be evaluated separately, especially by graduate schools or future employers. They reflect performance in that part of the educational program that is largely prescribed, and are obtained at a time when adjustments must be made to the college environment and to demands for new modes of learning. We believe the freshman record should be separated from the one a student establishes when he uses his greater degree of freedom to elect work that is consonant with his interests and special abilities. This recommendation, incidentally, does not imply that the grades of the freshman year should be ignored. They will stand on the record and be open to the inspection of anyone wishing to ~~view~~ SEE the college transcript. In view of this, what we are proposing should not be construed as an invitation to neglect the work of any part of the freshman year.

The Practice of Course Prescription. Our proposed freshman program consists, for the most part, of a set of prescribed courses. Our decision to recommend this type of program was arrived at only after lengthy discussions on the practice of "course prescription." These discussions served the useful purpose of clarifying our views on the role of required courses in a liberal arts curriculum and, in particular, made us aware of the perils to be avoided when a system of prescribed courses is endorsed.

It has become clear to us, for instance, that the practice of course-prescription is completely misunderstood when it is viewed as an end, rather than as a means to an end. A college exists to help students attain a liberal education. A variety of procedures may be used to help achieve this end. Course-prescription is only one of these. It should be continued only so long as we remain convinced that it can help us reach our broader goals more effectively than can some alternative practice.

It is also perfectly clear that no magic effects can be expected from the mere device of requiring a certain number of courses. This practice can never be any better than what is prescribed, and how that which is prescribed is actually carried out in the classroom. Any college that requires every student to take certain courses assumes a grave responsibility. It must do its utmost to see to it that such courses, in particular, are properly staffed and well taught. Otherwise, it will most assuredly court trouble and will inevitably raise doubts about the wisdom of prescriptive practices in any form.

When we endorse a prescriptive program what we must be most concerned about is to prevent it from becoming an obstacle to innovation. This may happen quite unwittingly and without organized effort. It is understandable that once a prescribed set of courses has become firmly established, each one of the courses in the set may come to be viewed as being indispensable. Attempts to replace them with different courses, or to allow some other courses to appear as alternatives, may meet with considerable resistance. Perhaps an even greater obstacle to change in a prescribed program may arise from the fact that any course required of all students demands a fairly sizable staff, particularly when these courses are taught in sections. In a number of instances, faculty members must specifically be recruited for participation in a required course. To abolish an existing required course or to replace it with another could easily result in no small amount of dislocation and shifting of faculty personnel. This fact may create formidable resistance to basic changes in a prescriptive program.

One way to avoid the development of curricular sclerosis which may become associated with a prescriptive program is to provide appropriate mechanisms for change. We should be eager at any time to encourage faculty members to develop new types of courses whenever these hold the promise of fulfilling our objectives better than existing courses. For this procedure to be effective, however, it would be necessary to excuse at least a certain number of students from a required course in order that they might render assistance in testing the merits of a possible alternative. Unless we approve this course of action, the only mechanism for change would be the rather sudden displacement of a required course by an untried alternative.

We believe a change is desirable with respect to another practice related to the courses we prescribe for all students. We now require a student who fails a prescribed course either to repeat this course at Amherst or to take a substitute course in the same subject elsewhere. Such a policy makes sense only when a prescriptive curriculum is viewed as consisting of a number of courses, in each one of which it is absolutely essential for a student to demonstrate the kind of proficiency that merits a passing grade before he may be considered eligible for the A.B. degree. We do not believe that a prescriptive program should be viewed in this manner, and for this reason we are not in favor of continuing the practice of requiring students to repeat courses or to take alleged facsimiles thereof in other institutions. A student may still be a worthy candidate for the A. B. degree even though he may not be able to master every one of the courses we now require or may require in the future.

The few comments we have made on the subject of "required courses" should not be interpreted to mean that we lack appreciation of the efforts and skills needed to offer them effectively. To be given the responsibility of teaching a course required of all students is a unique assignment--in some ways not an enviable one. Courses of this sort are dependent upon the effective collaboration of many teachers. To be successful they demand a willingness on the part of teachers to devote time to necessary staff meetings and to subordinate individual views to those approved by the majority of the staff. The price demanded is sometimes high. For this reason, if for no other, we should establish no more of them than are absolutely necessary.

Distribution Requirement After the Freshman Year

After the requirements of the freshman year are completed, we believe that students should pursue further work in each of the three major divisions of the curriculum. We favor reliance upon a distribution requirement to achieve this end. The nature of this requirement is made clear in the following proposals:

1. We recommend that two units of work be taken in the division of Mathematics and Natural Science, at least one of which must be in biology. In addition to a course in biology, we favor allowing at least a limited number of students to satisfy the distribution requirement in science by electing a one-unit course in either the history or philosophy of science. This may be more valuable to some students than an additional term's work in one of the laboratory sciences. Any student who does this will have had some training in mathematics, physical science, and biological science. On theoretical grounds, it is difficult to see why a student who already gained this degree of acquaintance with natural science should not round out his study in the Science division by an advanced course dealing with historical or systematic considerations. The attempt to make this possible, however, may run into practical difficulties. At present, we have only one member on the faculty who offers instruction in the philosophical aspects of scientific inquiry, and no one who does so in the history of science. The latter condition may eventually be remedied by action on the four-college level. In view of these considerations, our suggestion concerning these additional offerings for the second unit of work in science must be considered tentative; further explorations will be necessary to determine its practicability.

2. We recommend that two units of work be required in the Humanities division, at least one of which must be elected from the fields of drama, fine arts, music, philosophy, or religion. A foreign-language literature course elected to satisfy the foreign-language requirement may not be counted toward the satisfaction of this distribution requirement. This would not apply, however, to other foreign-language literature courses which a student may wish to elect.

3. The majority of the committee has agreed to support a continuation of an American Studies requirement for all students.[20] The defense of a prescribed course in American Studies takes various forms. It is argued that this course:

(a) Gives students an understanding of the American society in which they live.

(b) Provides training in decision-making processes upon which the successful functioning of a democratic society is dependent.

(c) Imposes frequent demands upon students to present in writing a case in support of the positions they take on controversial issues. Thus, one of its incidental advantages is the concern that the teachers of the course display in the written work of the students.

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[20] The general aims and objectives of this course are described in Appendix I.

(d) Is a "general education" course in social science. It does not emphasize any particular departmental interest. Rather, it brings together faculty members from a variety of disciplines who work together in a common enterprise to clarify for students what life in American society has meant and means today.

Obviously, many of these aims are laudable. No one of us is interested in the disappearance of a course that is organized around them, although there has been some difference of opinion in the committee as to whether this course should be prescribed for all students.

We might add that all we have written on the subject of prescribed courses in the freshman year is applicable to a prescribed course in American Studies. In particular, we believe that exceptions should be made to this requirement, with the Dean's approval, whenever a clear case can be made that a student would derive greater benefits from an alternative course in social science.

We must point out emphatically that we do not view the distribution requirements listed above as those that must necessarily be satisfied in the sophomore year. They are aimed at insuring some divisional distribution of a student's work beyond what is provided for in the prescribed courses of the freshman year. We believe that students should be given the privilege of satisfying the requirements whenever it is most appropriate for them to do so.[21] No doubt, many students will prefer to take work in more than one division of the curriculum during the sophomore year. Others may find it suits their purposes better to plan for spreading the divisional distribution throughout the remaining three years. In fact, we believe a good case may be made in support of such practice.

One of our main objectives in formulating a distribution requirement has been to increase thereby the scope of a student's general education. We view a "general education" course as, among other things, one that is not concerned with the training of specialists. Its aim is to introduce students to a range of significant ideas that have become an integral part of the liberally educated mind. It is courses of this sort that should be made available to students for purposes of satisfying our distribution requirement. Many such courses already exist. Others may need modifications to make them serve the purposes we have in mind.

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21. An exception may be necessary in the case of the American Studies course. Professor Taylor has reported that the American Studies staff is of the opinion that students should be strongly urged to take the American Studies course in the sophomore year. The majority of us are very reluctant to make any exceptions to the general principle we have stated; but we are willing to make the concession that the American Studies course would normally be taken in the sophomore year. This should not rule out, however, the possibility of reasonable exceptions.

In summary, after the freshman year, we favor a requirement that will insure further distribution of a student's work through the three major divisions. Except in the case of American Studies, we believe that students should be given a choice of courses to satisfy the distribution requirement. We urge that courses normally taken in satisfaction of the distribution requirement be organized and taught with "general education" aims in view. We do not favor an insistence upon the completion of the distribution requirement by the end of the sophomore year.

A comparison of our views with those of the 1945 Committee as to how the work of the first two years should be structured will disclose our most significant disagreement with the recommendations of that committee. Unlike that committee, we believe it is unwise to establish required two-year sequences of courses in each of the three major divisions with the proviso that the sequences be completed by the end of the sophomore year. There are three major reasons for our disagreement:

1. Structuring a curriculum for the first two years, as recommended by the 1945 Committee, implies a view with which we are not in sympathy; viz., that a clear distinction should be made between the work of the first two and the last two years in college.

2. Imposing a series of required sequence-courses to be completed during the first two years has the effect of depriving the student of a kind of freedom in the sophomore year to which we believe he is entitled--particularly a freedom to make explorations that are consonant with his own purposes and interests and that are often necessary to enable him to discover his "major" interests. The sophomore year, among other things, ought to be a time of new opportunity. A student should be free at this stage to make choices--even foolish choices. The exercise of liberty may be wasteful, but the price, we believe, is not too high. It is possible for a curriculum to be too well planned; what we desire is a plan "less perfect and more free." Robert Frost's humorous definition of what a student is doing in college,"hanging around until he catches on," is both subtle and accurate. To reinstate a series of course-sequences and require that a good portion of the first two years be devoted to them, simply conflicts with other objectives that we must not lose sight of.

In support of more freedom, beginning with the sophomore year, it may be argued that it is by the choices an undergraduate makes that he creates his identity as a student, and indeed in anything but an external sense, becomes a student. One need only consider the great variety of taste and talent which becomes manifest in the intellectual activities of any senior class to be reminded that we ultimately measure the achievement of our undergraduates by the test of what each man does with his choices and with his freedom to select his own program of studies. Indeed, it may be held that the best measure of what a college has done for a particular student is the degree to which he has learned to recognize, use, and exploit the assets unique to his own intellectual abilities and personality. It is in this sense that a liberal arts curriculum can be most genuinely "liberating."

3. We do not believe that sufficient educational advantages

are to be derived from establishing the kind of sequences intended by the 1945 Committee to warrant sacrificing certain other important interests in the planning of a curriculum. We might well have developed different views on this subject, had we been convinced that work in any conceivable set of sequence-courses was absolutely essential to all subsequent work in the college. This, however, cannot properly be said of the sequences originally intended by the 1945 Committee; it most certainly cannot be said of current practices.

The idea of establishing courses after the freshman year in the interests of furthering a student's general education is beyond criticism. We give this our strongest endorsement, but do so with the conviction that not all courses of this sort must necessarily be taken in the sophomore year. General education should be a four-year concern in any college that professes liberal intentions. Why should a student of the natural sciences not fulfill a divisional requirement in the Humanities by taking a course in the history of philosophy as a junior, or fine arts as a senior? He will have all the more opportunity to do so if his electives as a sophomore are not so rigidly restricted as they are at present. Moreover, he may derive more profit from the experience of diversification if he is more mature when this experience occurs.

The Sophomore Year

The sophomore year in our curricular model has several distinctive characteristics. A student will enter it after the completion of a program of studies which, for the most part, is almost entirely prescribed. For the first time he will be confronted with the necessity of assuming major responsibility for the formation of his educational program. In planning his program he will have to give consideration to the manner in which the distribution requirement is to be satisfied. Careful thought will also have to be given to a potential field of concentration. If, as a sophomore, a student is not certain of his major interests, he will have the opportunity, by deferring some distribution requirements, to make a number of explorations that will help furnish the basis for an intelligent decision. Finally, if the recommendations that follow are adopted, he will be given ample opportunity to plan a varied and interesting course of study. The proposals discussed below contain our views on what we consider to be desirable additions to the general program of the sophomore year.

Sophomore Seminars. We recommend the development of courses—whether described as "sophomore seminars" or "sophomore tutorials"—that would be limited both with respect to size(no more, for example, than twelve students per course) and to scope or coverage. We envisage such courses as the antitheses of the general introductory course or survey, since they would be organized around a closely limited body of subject matter. They would deal with a restricted set of issues or questions and might be confined, for example, to the work of a single philosopher, historian, theologian, novelist, painter, poet, or political theorist. Such a course in history, for instance, might deal with the revolutions of 1848, with the historical writing of St. Augustine, the Tudor gentry, the Russian Revolution or the major work of Jacob

Burckhardt. Opportunities in the fields of literature are self-evident. Because of their restricted scope, the seminars would plausibly complement the freshman courses and confront students with the study of a topic in depth, in place of a whole subject in length. For example, a student might well spend a term on an issue on which only a few weeks are spent in the Humanities, History, or American Studies course.

Further ideas concerning the objectives and implementation of these seminars may be summarized as follows:

1. In at least one underclass course, the sophomore would be required to do what is too often done for him, viz., to produce a limited body of knowledge from a limited body of data; to be held responsible for what he claims to know after examining all that he can read on a given topic.

2. Sophomores could be stimulated to use libraries and to discover what it is to develop both a bibliography and the procedures most suited to a modest research project. Too often our underclassmen assume that the only books "you really have to read" are on reserve or in a syllabus. The sophomore seminar should in most cases, we think, be worked out as an introduction to independent reading and writing in a course small enough to assure careful direction by the instructor, at the same time that discussion of related problems is going on in class. It is our hope that the student's experience in this course may help to foster in him the spirit of resourceful and independent inquiry which we are so much concerned to induce throughout the college as a whole, especially during the last two years.

3. These seminars can satisfy certain important needs of the faculty, as well as of students. In the required program of the freshman year, a considerable number of faculty members participate in cooperative courses. As we have previously pointed out, this kind of participation may necessitate the subordination of a faculty member's interests, and may also require him to expend energy on matters far removed from his center of interests. The sophomore seminars should make it possible for a number of faculty to teach the thing which interests them most. In this connection, the proposed course schedule of the freshman year is ideally suited to make some manpower available for the teaching of seminars. Historians, for example will not be involved in teaching freshman History during the first term; the Humanities course will be completed before the spring term begins; and no English Composition will be offered during the midwinter term. In other words, during each of the three terms, at least some of those who now teach freshman courses will be free to do other things.

4. We do not wish to offer at this time any rigid specifications as to how the seminars should be conducted. As is true of so many new ideas, experimentation is necessary to discover how best to put them into effect. We suggest that seminars be conducted without lectures, and that use be made of a combination of directed discussion and student reports on the work expected of them on a common

topic. We urge that each student be required to write a paper on the reading and research he has done.

5. We are not proposing that every department be asked to create seminars. We should like to think, however, that this kind of instruction would be given wide consideration. Initially, they will doubtless not be very numerous; hence it will be necessary to restrict them to the more able students. If successful, however, we hope their number will increase sufficiently to make it possible for us to consider the idea of requiring all sophomores to elect at least one of them.

6. We are not interested in the development of any rigid or settled set of sophomore seminars, but rather of an offering which would vary from year to year. Although a large department might offer two or three such courses each year, the courses themselves would change along with those who teach them. We believe these seminars should become one area of the curriculum open to constant innovation.

7. We see no reason why these seminars should not be offered during all three terms of the sophomore year. The midwinter term, in particular, might be a very good time to make them available.

The Midwinter Term of the Sophomore Year. We believe that a significant dimension could be added to the sophomore program by the exploitation of possibilities inherent in a midwinter term. We have entertained a variety of ideas in this regard, and others will doubtless be generated by further discussion of this subject in the faculty at large. To stimulate this ~~type of~~ discussion we recommend that the following types of courses be made available during the midwinter term of the sophomore year:

1. One-half unit lecture-reading courses in areas of general educational significance. We believe these are especially worthy of serious consideration. What we have in mind is a type of course in which the maximum emphasis would be placed on independent study by the student. A restricted number of lectures could be offered for the primary purpose of orienting students to a reading program.

2. Either full-unit or half-unit courses in the literature of foreign languages. Some students may find it advantageous to defer the satisfaction of a foreign language literature requirement to this term.

3. One-half unit courses in music, drama, or fine arts.

4. Full-unit, small-enrollment seminars proposed above.

5. A one-half or full-unit course in a non-Western culture, organized around a series of lectures by an expert in that culture, a syllabus of required readings, and discussion sections. It is our hope that four-college resources might be utilized to help implement this idea.

We have one final proposal to recommend concerning the sophomore year. We do not favor the continuation of a Public Speaking requirement. This is not meant to imply that skills in oral communication are unimportant, or that no instruction aimed at developing these skills should be offered. We believe that there should be one person on the faculty who is qualified to furnish instruction in this area and also to give the encouragement and supervision needed for the development of interests and skills in the art of speaking. Students who exhibit deficiencies in oral communication should be advised to avail themselves of the opportunities offered on an elective basis.

Concentration Programs and Honors Work

A very important part of our general curricular structure remains to be considered. This has to do with the policies and practices pertaining to programs of concentrated study in one subject, and also to honors work. For many years Amherst College has been committed to the view that there is value in requiring all students to study one subject in depth. In fact, there was a time when two "majors" were required for this purpose, each of which demanded the completion of three year-courses in one subject. The practice of requiring concentrated work in a subject was originally adopted as one feature of the curricula developed in a reaction against the free-elective system. In support of doing this at Harvard, President Lowell argued, in the early part of this century, that 'the best type of liberal education in our complex modern world aims at producing men who know a little of everything and something well.'[22]

We are in favor of continuing the requirement that every student should come to know a particular subject in sufficient depth to give him the sense of what it means to master a given body of knowledge. We believe, however, that some improvements should be made in what we are now doing to achieve this goal. At present, the "major" programs of a number of students, particularly those not engaged in honors work, lack clear purpose, coherence, and direction. Courses are often elected at random, without much concern for the relationships between them or with insufficient awareness of how the courses chosen relate to the broader concerns of a discipline. We have even gone so far as to approve "majors" requiring very little concentration in any discipline. This is true of a number of existing interdepartmental majors. Moreover, students who are not engaged in honors work may graduate without ever having completed a major independent project or paper.

Part of the problem referred to above could be solved by prescribing most of the work in a major subject and arranging courses in a sequential order, so that foundations laid in one course could be utilized in the next. This idea has been under discussion at Amherst for several years and has some strong supporters in the faculty. It is highly doubtful, however, that it can be applied to all subjects.

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[22] George P. Schmidt. The Liberal Arts College: A Chapter in American Cultural History(New Jersey: Rutgers University Press,1957) p.209.

Some subjects simply cannot be partitioned into a series of courses to be taken in a tight sequential order. The device of attaching prerequisites to courses is certainly possible and desirable in all subjects, but there are some subjects in which no more than this may be feasible. Even if it were, and if all departments chose to arrange work in the major in a sequential order, new problems would have to be faced. For instance, this practice would make it difficult, if not impossible, for a student who does not major in a subject to take advanced courses in it. He would be handicapped by a lack of the background that would be assumed.

We have concluded that "vertical structuring" of courses is practicable primarily in those departments in which advanced courses are taken almost exclusively by majors. But vertical structuring of courses is not feasible when the advanced offerings of a department are sought by many non-majors. We favor as much sequential work in the major as possible; however, the limited applicability of this idea suggests that other methods with somewhat comparable advantages should be developed. What these methods might be is disclosed in some of the recommendations offered below, dealing with various aspects of "rite" concentration programs and honors work. Some of these recommendations have been formulated for the purpose of adding new significance to the work of the upperclass years. Others specify procedures that are needed to adapt our ideas for concentration to a four-course plan and to a new academic calendar. Concerning the former, we particularly urge that work in the "major" be structured in such a way as to make the student aware of the fact that getting an education is something more than a process of merely passing courses-or what is even worse, passing only parts of courses. We appeal for more organization in the work of the "major", culminating in the writing of a paper and the passing of a general examination by all students. Our various recommendations are as follows:

1. We recommend that the requirement for a major consist of the completion of at least eight units of work. A student may, if he prefers, elect two of the eight units(but no more than two) in course work that is closely allied with the major subject. We further recommend that no student be permitted to elect more than a total of twelve units of work in any one subject(exclusive of prescribed freshman courses) without special approval of the Dean. This is one effective way to prevent excessive specialization. Twelve units of work in one subject should suffice to provide for an adequate program in depth and to lay the necessary foundations for subsequent graduate work.

2. We recommend that all students be held accountable for a range of knowledge in the major subject that is greater than can be obtained in any single course. The technique we have in mind for this purpose is an examination on some area within the major field beyond the scope of any single course. This examination should not be designed to cover the entire field of the major subject, as "comprehensive" examinations are purported to do. The latter suffer from the defect that they must often be given to students who do not cover the

same terrain in the major subject. When a substantial body of common experience in the major cannot be counted on, it is exceedingly difficult to construct satisfactory comprehensive examinations. For this reason we favor a type of examination more limited in range, yet broad enough to encompass what may be covered in four or five courses, or the partial equivalent thereof in some form of independent study. We will designate these as "area examinations."

We expect variation among departments in the kinds of area examinations to be made available. Some departments may prefer to settle for only one type of examination on the grounds that all of its majors should be examined on certain basic ideas. A number of courses might accordingly be required of all majors, or at least strongly recommended, and the area examination could thus deal with the common experience of all majors. These procedures are worthy of serious consideration whenever applicable. Other departments may find it desirable to offer alternative foci of concentrated efforts within the major subject and designate a number of different areas of examination. In either case, however, the same objectives would be sought:(a) to impose demands for comprehensive rather than fragmentary learnings; (b) to induce the student to focus attention on significant relationships between the material encountered in various courses or through independent study; (c) to furnish some guiding principles for the election of course work in the major.

In summary, we recommend that all non-honors students be required to pass an area examination. The same demands should be made of honors students unless a department prefers to retain a comprehensive examination instead of the somewhat more limited area examination.

3. We believe that interdepartmental majors in which nothing more is demanded than the completion of a few courses in each of two subjects should be abolished. In such majors, at present, a student may elect as few as four courses in one subject, and the same number in another, and may do so without paying much attention to their interrelations or to any broader integrating principle. If our endorsement of the concentration principle is to have a significant educational effect, we believe that the minimum of six courses should normally be taken _in one discipline_. Interdepartmental majors that permit fewer courses than this in any one discipline should not be approved, unless the courses comprising them have a clearly discernible pattern of organization and interrelatedness. We do not oppose well-conceived programs of concentration that cut across the boundaries of interrelated disciplines; we simply urge that efforts be made to give coherence to such programs.

We therefore recommend that all interdepartmental majors be re-examined in the light of the ideas we have presented. Such programs should not be announced in the catalog without approval by the faculty. We should, however, maintain sufficient flexibility to permit interdepartmental programs of concentration to develop also on an _ad hoc_ basis. To eliminate the necessity of complicated procedures for the approval of such programs, we suggest that when they are devised, a report of their nature be filed with the Committee on Educational Policy by the departments or faculty members involved. It will be useful to preserve a record of new programs of interdisciplinary work. In this way statements may be issued periodically to the faculty concerning developments in this area, and an occasional review will thus also become possible.

4. We recommend the continuation of an honors program for qualified and interested students. The major emphasis should be placed, as now, on an intensive piece of research which is summarized in a thesis, but we hope that efforts will be made to balance the attention given to a very specific problem with some concern for the broader issues of the major subject. An honors student might be expected to come to terms with the surrounding context of his specific problem, and to reveal what he has learned about the context when asked to defend his thesis. Or, honors students might be given a list of general readings to master in conjunction with work done on the thesis. We offer these suggestions because of the criticism that honors work, at least in some departments, has become too specialized. We have to keep reminding ourselves that the objectives of a liberal arts college are not the same as those of a graduate school.

5. We recommend that all non-honors students be required to engage in some type of independent research culminating in the writing of a senior paper. This proposal is not intended to abolish the distinction between honors and non-honors programs. We believe this distinction should be maintained, but with a reduction in the gap that now separates the demands made by the respective programs. Honors students should be expected to devote more time to their senior research and to meet more rigorous demands than the "rite" students; but we should expect more of the latter than is now the case in most departments.

The writing of a major senior paper is the least we can expect of students in a college that can attract a very able student body. No student should be permitted to graduate until he has demonstrated competence in at least one major effort of research and writing. We need to challenge students to find some area of special interest, to learn what it means to study something with thoroughness, and to communicate the results of their inquiry in a competent manner.

We urge that students be stimulated to give thought to the senior paper during the junior year; in fact, it may be advisable to require all students to submit ideas for the paper before the end of the junior year. Work on the paper should begin, preferably, during the first term of the senior year and be completed during the midwinter term. The first term of the senior year, incidentally, will probably be the most appropriate time for non-honors students to use their privilege of scheduling a three-course program. This will allow more time for work on the senior paper and preparation for the area examination.

6. We recommend that the midwinter term of the junior and senior years be used exclusively for work in the major subject. We propose that juniors give all of their time during the midwinter term to a course in the major department. This gives departments an opportunity to provide all majors with a common experience of dealing with matters of central importance to a discipline.

Seniors should be permitted to use the midwinter term for purposes of independent study in the major subject. We suggest that the major portion of this time be set aside by non-honors students for completing the senior paper, and by honors students for intensive work on their research projects.

7. We recommend a maximum of one unit of credit in the junior year and three units(one each term) in the senior year for honors work. One unit of credit should be given to non-honors students for a satisfactory senior paper(due at the end of the midwinter term) and the passing of an area examination(to be given preferably near the end of the midwinter term.

8. Because of the difficulties of grading an honors project before it is completed, we recommend that no grades for senior honors work be required until the end of the senior year. At present grades are expected at the end of the first semester. This, it is argued, is desirable because it makes available a complete seven-semester record held to be necessary for awarding Phi Beta Kappa recognition and for use on transcripts sent to graduate schools. Neither of these seems to be a very compelling reason for requiring the faculty to grade a performance on the basis of very incomplete information.

The new directions we have outlined for programs of concentrated study have one very significant implication. Ideally, our proposals demand that most students will have had sufficient opportunity, before beginning the junior year, to discover an area of major interest. They make it more necessary than ever that students be definitely committed to some major subject before the beginning of the junior year. It is exceedingly difficult to impose structure upon the work done in the major subject and expect students to move toward a planned goal, if at the same time we have to accomodate to students who decide to make shifts in their areas of concentration during the middle of the junior year or even later. This is not uncommon at the present time, and some students attribute this to the fact that they simply have not been given sufficient time for exploration during the first two years. We believe this problem may become less acute if we allow a higher degree of freedom during the sophomore year than we now do.

Provisions for Independent Study

Many of our students should be capable of assuming a certain amount of responsibility for their own educational development through independent or semi-independent study. We are in favor of making adequate provisions for independent study, but we believe that this type of study should not be given undue emphasis. The primary justification for maintaining institutions of higher learning is that students may be given therein the benefit of instruction, and the opportunity to develop and clarify ideas in interaction with those who are qualified to render valuable assistance in the learning process.

A number of provisions for independent study have already been made in this report. A uniform four-course plan provides an opportunity for more intensive work than is possible when five or more courses are taken at one time. Our plans for the use of the midwinter terms stress independent study. Moreover, we have recommended that every student engage in one major effort of research and writing in the senior year.

In addition to the above, we recommend that students be permitted to take two units of work in the last two years in Reading Courses or their equivalent in some form of independent study, but with one change in our present practices. We now permit students to take Reading Courses whenever they can prevail upon some faculty member to assume responsibility for supervision. This practice, despite some weaknesses,[23] should be continued. But we believe that it would even be more desirable for faculty members to provide students with a statement of those areas of inquiry which they believe can profitably be explored by means of an independent reading program, and with which they feel competent to deal. This procedure would give students a better idea of what could be done in a Reading Course, and would also give faculty members an opportunity to indicate what they would be prepared to supervise.

When the Reading Course was first introduced, its proponents suggested that it be viewed as an invitation to genuinely independent study, involving a minimal amount of supervision or prodding on the part of an instructor. We favor this conception, for we believe that students should be given an opportunity before they graduate to develop some proficiency in the use of a method upon which they will have to rely in future years for further educational growth. We do them a real disservice if nothing is done to foster confidence in their ability to learn independently.

Physical Education Requirement

A physical education requirement has received faculty support at Amherst College for a long time. We believe that this should be continued. The nature of our present requirement may be briefly summarized as follows:

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23. It has been pointed out that the faculty as a whole has no control over the subjects being studied under the rubric of a Reading Course. The suggestion has been made that a public statement on all Reading Course topics or areas be issued so that the faculty could be given some idea as to what is being studied.

1. All students must do the following: (a) pass a physical fitness test (b) demonstrate an ability to swim 100 yards; (c) engage in a "team" sport for one semester, and a "recreation" sport(e.g., golf, tennis,squash) for another.

2. All freshmen and sophomores who are not members of athletic teams must attend physical education classes three times a week throughout the year.

The Physical Education Department has recently engaged in a review of the physical education program and has presented us with the following recommendations:

1. The existing requirements should be maintained.

2. A physical fitness test should be administered at the beginning and end of the freshman year and twice during the sophomore year.

3. The freshman program should consist of activities assigned in rotation in the fall, winter, and spring seasons. The satisfaction of a swimming requirement should be a prerequisite to enrollment in the rotation program.

4. The sophomore program of physical education should be scheduled from two to three o'clock in the afternoon and should consist of courses during the fall, winter, and spring seasons that follow up, as much as possible, those offered to freshmen. Satisfaction of the departmental requirements should entitle a student to choose whatever activity he wishes.

5. Students receiving a sufficiently high grade in the physical fitness test at the end of the freshman year should be given the option, in the sophomore year, of either attending physical education classes or assuming responsibility for their own physical fitness. If they choose to do the latter they should: (a) be held responsible to an advisor for their own program; (b) demonstrate adequate performance on the two physical fitness tests to be administered during the sophomore year; (c) be assigned to physical education classes, if they fail the mid-year physical fitness test; (d) be required to take physical education classes during the first term of the junior year if they fail the year-end physical fitness test.

6. Students should be freed from academic engagements during the latter part of the afternoon for physical activity and participation in the practice sessions essential for effective competition in intercollegiate sports.

We are willing to endorse the above recommendations, but with certain qualifications. We believe that serious consideration should be given to the reduction of the sophomore physical education requirement to two class periods per week. If this were done, it might be somewhat easier to schedule the necessary class periods than is now the case. As to when sophomore physical education classes should be held, we believe this is best decided by the Dean's office in consultation with the Physical Education Department, and not by faculty action.

Recommendation(6) is the one that presents the most difficulty. We can fully understand why the Physical Education Department is strongly interested in recommending a free period after four o'clock in the afternoon; however, under existing conditions, we do not know of any effective way of guaranteeing that all students shall be free every afternoon in the week. The most serious obstacle to this is presented by the laboratory periods required in some of our science courses. As long as these cannot begin until 1:30 or 2:00 P.M., there will be some inevitable encroachment upon the late afternoon period. We could conceivably solve this problem by means of a rule that all laboratory periods terminate at 4:00 P.M., or at least by 4:30 P.M.; but this would doubtless not be very realistic, in view of the difficulties that would then have to be faced in structuring meaningful laboratory work in a number of science courses. If nothing can be done about placing a limit on the length of laboratory periods, then the least we could do would be to schedule no other academic work during the late afternoon when this could be scheduled at some other time.

New Subjects in the Curriculum

An historical review of higher education in America during the last hundred years discloses that there has been a steady increase in the number of subjects included in the curricular offerings of colleges and universities, and an even sharper increase in the number of courses given in well-established subjects. Amherst College has not remained unaffected by this trend. We have added a number of new subjects during this period and have increased the course offerings in others. This expansion has been stimulated in part by an increase in the size of the student body from 176 in 1850 to more than 1000 at the present time. But some of this expansion simply reflects concerns to include new subjects, when it becomes clear that they have a significant contribution to make to the liberal education of the student, and to provide more detailed coverage of any one subject when the body of knowledge it comprehends is progressively enlarged.

When a major curricular review is undertaken, it is not possible to avoid raising the question of further expansion. In particular we must ask whether any new subjects should be included in the curriculum. If so, by what general principles should we be governed in providing a place for them? The first of these questions is a difficult one to raise at the present time, owing to the understandably strong pressures to make economical use of our financial and teaching resources. Pressures of this sort seemingly leave us no alternative but to operate on the principle that new subjects be taught only when they may be substituted for others, or when some reduction is made in the number of courses offered in existing subjects. This principle quite clearly implies that no new subject should be added to our curriculum unless a very strong case may be made for doing so.

We have not felt the need to recommend much in the way of new subject matter. In fact, only three subjects have come up repeatedly in this connection. These are sociology, cultural anthropology, and studies in non-Western culture. Professor Plough has offered a course (limited to twelve students) in the second of these subjects for two years; he is retiring, however, at the end of this year. It has been some time since any systematic attention has been given to sociology at Amherst. Work in non-Western cultures is only slightly represented. What should be done about these subjects?

A number of faculty members have urged us to recommend that courses be offered in both sociology and cultural anthropology. Our discussion of these subjects, however, has provoked mixed reactions. Some have argued that we already give attention to these fields in various ways in existing courses--although admittedly in an amateur fashion. "Why do more"? they ask. "Will our students really be handicapped by not being able to take courses in these subjects"? Moreover, the possibility now exists of taking work in these subjects in our neighboring colleges. Why then should it be necessary to teach them at Amherst?

Several arguments can be made in favor of offering courses in sociology and cultural anthropology at Amherst. We must recognize at least that Amherst College is one of the very few institutions in the country that has chosen to do little in the way of dealing systematically with one or the other of these subjects. We are not suggesting that this is necessarily "bad". But it should be pointed out that by ignoring them we are expressing disagreement with a widespread consensus of opinion that the ideas and findings of both sociology and cultural anthropology deserve competent representation in the curriculum of a liberal arts college.

It is also to the point to argue that a number of social scientists at Amherst make use of sociological and anthropological literature and expect their students to do the same. If this be so, should not all of us, students and faculty alike, be given the benefit of having somebody on the campus to keep us,as well as our library, abreast of the developments in these areas? Moreover, both sociology and cultural anthropology represent an approach and a perspective that cannot properly be neglected in the analysis of societal and cultural phenomena. Should not students be given the opportunity to learn about these from those best qualified to develop them in a systematic fashion?

It is thus clear that arguments may be presented on both sides of the issue under discussion. We have found it somewhat difficult, however, to evaluate the cogency of the arguments. No one of us, after all, is either a sociologist or an anthropologist. We know something about these fields; we sense what may be their importance; but we lack the basis for a completely informed judgment. The best we can do is to indicate our preferences, and thus recommend that some course work in both sociology and cultural anthropology be included in our curriculum, but only under the conditions stated below:

For one thing, we most certainly are not interested in the establishment of any new department. We should prefer, rather, that courses be taught in sociology and anthropology within the framework of existing departmental organization. Wesleyan University has done this, for instance, by attaching a sociologist to one department and a cultural anthropologist to another. Perhaps we could employ a similar practice. We realize, of course, that we may find it difficult to procure, under these conditions, the preferred type of person or persons to represent these subjects. We shall never learn this, however, unless we make the attempt. If we cannot find properly qualified teachers who are willing to work without departmental organization, then we feel it would be better to offer no courses in either sociology or anthropology.

Another condition should be stipulated. Concerted efforts must be made to prevent an excessive proliferation of courses in either sociology or anthropology. The possibilities for proliferation are clearly indicated in Table VII, which gives a sample of courses culled from the catalogs of institutions with thriving departments of Sociology and Anthropology. Our efforts, rather, should be aimed at establishing a few basic courses serving the purposes of: (a) providing an introduction to the major problems dealt with in these areas; (b) revealing the methods and conceptual models used to generate a body of systematic knowledge pertaining to society and culture; (c) imparting significant generalizations that may be made on the basis of existing knowledge.

Finally, some mechanisms should be worked out to accomplish what we have in mind without permitting it to effect a net increase in the size of the faculty. If this cannot be done, then perhaps we should defer action until it becomes clear that additions to the financial resources of the college may make some expansion possible without undesirable effects on either ongoing enterprises or faculty salaries.[24]

The only other new subject matter we have discussed from time to time is "Non-Western Cultures." We believe it would be desirable, financial resources permitting, to give these somewhat more attention than we have in the past. It is not difficult today to make a case for the importance of giving students an awareness of the significant developments and achievements in cultures quite different from the one in which they are immersed. This point was stressed in a report issued in February of this year by the Committee on Area Studies of the Four Institutions.

> "Our culture is the product in large measure of the evolution of Mediterranean-Western civilization in the past six thousand years, and this is the justification for the overwhelming emphasis commonly given in our educational programs to the study of

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[24] Dissent--I have no fundamental objection to offering courses in sociology and anthropology. However, as a small college, there are many fields in which we cannot offer instruction. I especially question the advisability of adding these subjects to our curriculum when courses in them are already available to our students at nearby sister colleges. George R. Taylor.

Table VII. A Sample of Sociology and Anthropology Courses Offered in Colleges and Universities

I. Sociology

1. Introduction to Sociology
2. Introduction to Social Work
3. Marriage and the Family
4. The Family
5. Rural-Urban Sociology
6. Ethnic and Minority Intergroup Relations
7. American Social Classes
8. Comparative Social Institutions
9. The Sociology of Occupations
10. Recent Sociological Theories
11. Social Problems and Social Movements
12. Methods of Sociological Research
13. Community Problems
14. Sociology of Knowledge
15. The Study of Public Opinion
16. Social and Psychological Factors in National Planning
17. Mathematical Models in Social Science
18. The Community as a Foundation of Democracy
19. Social Conflict and Disorganization
20. Collective Behavior and Social Movements
21. Population Problems
22. Group Organization and Leadership
23. The Sociology of Planning
24. Religion and Society
25. Processes of International Integration
26. Social Stratification
27. American Culture and Social Structure
28. Industry and the Social Order
29. Sociological Factors in Political Power
30. The History of Modern Social Thought
31. National Patterns of Culture
32. Small Group Behavior
33. Social Maladjustment
34. Criminology
35. Social Structure of China and Japan

II. Anthropology

1. Introduction to Anthropology
2. Cultural Anthropology of the Old World
3. Cultural Anthropology of the New World
4. Human Evolution
5. Language and Culture
6. Prehistory
7. Religion in Primitive Society
8. Race in Society and Science
9. History of Anthropological Theory
10. Social Anthropology
11. Culture Change and Contact
12. Peoples of the Middle East
13. Social Anthropology of Negro Africa
14. The Socialization Process in Variable Family Structures
15. Anthropological Studies of Contemporary Nations
16. Cultural Dynamics
17. Culture and Personality
18. Mythology and Folklore

> the development of the West. But it has become clear in recent decades—and dramatically so since the end of World War II—that an excessive preoccupation with the West has deprived us of (1) an adequate understanding of non-Western cultures, (2) the important insights into our own culture which can come from comparative study of other cultures, and (3) knowledge and understanding of areas and cultures central to our security. It is clear that America's educational institutions can no longer neglect this responsibility and that even colleges with relatively small faculties should make available to their students some knowledge of non-Western countries. Perhaps only those universities with really ample facilities and budgets will be able to devise well rounded programs in areas where there are major difficulties with language and library materials. But all institutions can make useful contributions to the dissemination of knowledge of non-Western cultures and developments, an activity which can be of great value both in contributing to the field of general education for the undergraduate and in stimulating the interest of a smaller number of students in professional specialization at the graduate level."[25]

We shall later recommend that some provisions be made for giving attention to non-Western cultures during the midwinter term of our proposed calendar. We also hope that Amherst College will be able to take advantage of procedures that may be developed to introduce area studies by means of four-college cooperation. Recommendations to this end have already been submitted to the Presidents of Amherst, Mount Holyoke, and Smith Colleges, and the University of Massachusetts by the above-mentioned committee. We should add, incidentally, that there is some relationship between advocating the procurement of faculty personnel in the fields of sociology and anthropology and encouraging greater attention to non-Western cultures. Sociologists, and more particularly cultural anthropologists, can make very useful contributions to any course work offered in non-Western cultures.

Small-Enrollment Courses

Amherst College has traditionally offered many small-enrollment courses.[26] Normally, this fact would not provoke extended discussion in any curriculum committee. Small-enrollment courses would probably be

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25. Area Programs to be Given by the Faculties of Amherst, Mount Holyoke, and Smith Colleges and the University of Massachusetts: A Report of the Committee on Area Studies of the Four Institutions, February 4, 1959, p.1.

26. For instance, during the two-year period 1955-1957, fifteen or fewer students were enrolled in fifty per cent of the courses offered; ten or fewer in thirty-eight per cent; and five or fewer in twenty per cent.

viewed as ~~being~~ necessary in any college which aspires to offer a good education. Today, however, they are considered in some quarters to be a luxury that can no longer be afforded. If many of them are permitted, it is argued, a college cannot effect as much economy in the use of teaching and financial resources as is needed to meet the developing crisis in higher education. This type of argument cannot be completely ignored. It suggests that we at least give our small-enrollment courses careful scrutiny. In doing so, we must ask two basic questions regarding them: first, is there any way of reducing the number of small-enrollment courses without jeopardizing our educational goals? Second, what is their educational significance in a college such as Amherst?

Several methods have been suggested for reducing the number of small-enrollment courses. The most drastic of these would abolish those subjects in which only a small percentage of students in our colleges manifest an interest. We are not in sympathy with this proposal, for it suggests that the criterion for including subjects in a liberal arts curriculum should be their "popularity" with students. To accept this kind of criterion would be completely out of character for a college which conceives its primary function to be that of offering a liberal education in the most comprehensive meaning of that term. Some of our courses, to be sure, have small enrollments because the subjects taught appeal only to a small number of students. But we certainly cannot run the risk of giving this factor much weight when we decide on the content of our curriculum. We favor the continuation of those subjects which deal with the significant intellectual achievements of man, regardless of their appeal to students--especially those subjects that unmistakably represent the best in the liberal arts tradition. What is included or maintained in our curriculum should not follow the course election "returns."

If abolishing subjects as an economy move does not make sense, what does? A few alternative procedures have been suggested for reducing the number of small-enrollment courses:

1. *The size of the student body should be increased*. This would increase the size of small-enrollment courses if students in a larger college distributed themselves among courses in the same proportion as in the smaller college.

2. *Small-enrollment courses should be offered in alternate years whenever possible.* This would be economical only if it effected some saving in manpower.

3. *Concentration programs should be abolished in those subjects in which the number of "majors" is typically small.* This procedure is supported on the grounds that it can eliminate one of the causes of small-enrollment courses. Any major program requires a certain number of advanced courses. If the number of the latter is typically very small,[27] then obviously the

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[27] During the four-year period 1955-1958, the average number of majors per year in *twelve* departments was approximately *two*.

effect of offering a "major" under these conditions would be to create a number of small-enrollment courses.

4. Maximal use should be made of four-college cooperation, particularly by small departments. This procedure is already being used, to some extent, and promises to take on more significance if some of the problems which now make it difficult can be solved.

Each one of the above proposals seems to have some merit. We are not suggesting, however, that any or all of them be used to eliminate the small-enrollment course. A strong plea must be entered here in support of maintaining as many small-enrollment courses as we can afford, for it is these courses that provide the conditions under which it is easiest to offer education at its best. Such courses enable an instructor to maintain close contact with the work of his students and to offer the kind of instruction that is impossible to give in a large course. The teacher can also set tasks in small-enrollment courses that are impracticable in larger courses.

Although we strongly believe that small-enrollment courses should be maintained, we agree that it is not realistic to assume that students may be given a large number of such courses. To attempt this, for one thing, would demand a prohibitive increase in the costs of education and would be exceedingly difficult, in any case, in view of the impending shortage of college teachers. What we need to strive for, rather, is a proper balance between the large- and the small-enrollment courses. In fact, before long, a substantial number of the former may be needed to make it possible for us to continue to offer an appropriate number of small-enrollment courses.

One final point must be made. Small-enrollment courses at Amherst have been criticized recently because the lecture-method is used in teaching some unspecified number of them.[28] This abuse of opportunity, say the critics, is indefensible. "Is it not wasteful of our resources," they ask, "to lecture before a class of five students when this could more economically be done before one hundred"? In reply, we must admit that we do not yet know to what extent the lecture-method is actually being used in our small-enrollment courses. We have not had sufficient time to study this problem thoroughly. All we can do at this point is to assert that the best way to meet any criticism of the small-enrollment courses is to exploit the kind of possibility which is unique to such courses.

In conclusion, we reiterate our plea that as many small-enrollment courses as possible be maintained, but we urge that they be exploited to the utmost for the unique teaching possibilities they afford and that support be given to any steps that may be taken to effect necessary economies.

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[28] A similar criticism has been directed at the manner in which some section meetings of larger courses are conducted.

Proposed Review of All Courses in the Curriculum

Much of our labor will have been in vain if we cannot induce each department to examine its course offerings and to make the adaptations suggested in various portions of this report. It is a healthy thing for all departments periodically to make a careful review of course offerings, consider new possibilities and make constructive changes. A number of our proposals, if adopted, will require new thinking. New types of courses will be needed. Some courses may have to be eliminated to make room for innovations. We recommend, therefore, that each department re-examine its course offerings and submit to the faculty a new statement on all courses it wishes to offer.

We hope this appeal for re-examination will result in a real effort to restrict course offerings to those that are most essential and that are consonant with the general aims and purposes of a small liberal arts college. Inclusive "coverage" of subjects should not be our concern. We discharge our obligations most responsibly when we make a concerted effort to teach well what is most basic. Let us not worry about closing all the "gaps" in a student's education! If gaps there must be, let us give our students the kind of equipment they shall need to fill these gaps by their own efforts. We should never lose sight of the fact that students can never be given a "complete" education in four years. All we can do is to get them started in the direction of becoming liberally educated men.

If our proposal for a general review of courses is given a favorable response, a considerable expenditure of time and energy will be needed to realize the intended objectives. We believe that if it is accepted, a committee should be designated and charged with the responsibility of requesting departments to prepare and submit reports on proposed curricular offerings. These should be carefully reviewed by the designated committee and presented to the faculty for action. In this way the entire faculty will once again have a voice in determining the total content of the Amherst curriculum.

B. Proposed Changes in Educational Policies and Practices

A number of matters pertaining to our general educational policies and practices have been considered. The more important of these are discussed below, and various recommendations for change are offered.

Academic Counselling

We believe that students should be given more effective academic counselling than they now receive. This will be especially necessary if our major proposals for curricular change are adopted. We recommend that our freshman faculty-advisor system be strengthened and that consideration be given to providing extra financial remuneration to those who act as advisors. One important function of the Freshman Advisors should be to help the student plan his sophomore program and to engage him in discussions of his entire educational program.

We further recommend that each student be assigned to a specific advisor in his major department and, unless circumstances prevent it, that this advisor assume responsibility for offering necessary advice and counsel throughout the student's major program. Our proposals for the last two years make it essential that all students be given proper orientation to the major work in a department, and guidance in the planning of their upperclass program.

Advanced Placement, Advanced Credit, and Acceleration

We cannot at the present time avoid some discussion of the implications of recent developments in secondary schools which have resulted in providing the able student with more challenging and mature types of learning experiences. One factor that has played an important role in the encouragement of these trends is the Advanced Placement Program, the influence of which has grown rather remarkably with each year since it first came under the administration of the College Board in 1955. This program, from its inception, has had two primary functions: (a) to stimulate secondary schools to give the able student the advantage of advanced studies; (b) to provide a series of examinations in different fields to assess the outcomes of such studies. It is interesting to note that in May of 1958, 3,700 secondary school students took 6,900 Advanced Placement examinations. Plans are being made to give tests to as many as twelve to fifteen thousand students this year.

The response of colleges and universities to the developments fostered by the Advanced Placement Program has been varied. Some colleges, including Amherst, have gone no further than to excuse students who have shown creditable performance on Advanced Placement examinations from the necessity of taking repetitive work in college. Others have given this type of performance an even higher degree of recognition by granting college credit for secondary school achievements ordinarily attained only by college students. In 1958, for instance, the Director of the Advanced Placement Program asked a number of colleges for policy statements pertaining to advanced placement and advanced credit. Of the 360 colleges replying, 150 reported "an established policy of granting appropriate placement to students who have taken Advanced Placement courses and have done well in the College Board Advanced Placement Examinations. Two hundred ten colleges have a policy of granting both placement and credit. The majority, therefore, favor the granting of academic credit."[29] It should be noted that the practice of granting college credit has also been associated with a policy of encouraging the able student to complete his college studies in less than four years, if he be so inclined.[30]

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29. D. A. Dudley. The Advanced Placement Program: Report to the 1958 Conference, pp. 13-14.

30. The number of entering Harvard students admitted to sophomore standing since 1955 are as follows: 1955-2; 1956-13; 1957-13; 1958-55. All of these had passed at least three Advanced Placement **Examinations**.

At Amherst College we began in 1957, under the direction of Dean Esty, to offer advanced placement to a certain number of students. In the Class of 1961, twenty-two students took forty Advanced Placement Examinations. To this group, twelve advanced placements were granted (five in French, five in mathematics, and one each in biology and physics). In the Class of 1962, forty-four students took ninety-five Advanced Placement Examinations,[31] and twenty-one advanced placements were granted(four in biology, seven in French, two in chemistry, five in mathematics, and one in German). Our procedures for granting advanced placement, as described by Dean Esty, take the following form:

> "In August, for each entering freshman in the Advanced Placement Program, the college receives an Advanced Placement Examination with an official grade and a report from his school, which includes a syllabus of the advanced course. This material is then sent by me to the director of the appropriate course, and during the orientation period each freshman involved is invited to confer with this director to determine the feasibility of advanced placement. If the director approves of granting the student advanced placement, the student is excused from the course and is required to substitute some other course."

In his report to our committee, Dean Esty made the following observation:

> "In retrospect, there has been no case where a student granted advanced placement has received a grade lower than 80 in the next highest course of the same subject-sequence. It is clear that the advanced placement candidates are among the brightest and best prepared of all our students. There is some evidence to show that our present policy of granting advanced placement has been appealing to bright students with advanced secondary school training, but also that some of these brighter students seem to be deterred from applying to Amherst College because of our failure to grant advanced credit."

The issue we face at the moment is to determine what our policy should be with reference to granting college credit for advanced secondary school work, and to the related matter of encouraging some of our students to complete their college work in less than four years. The case for adopting a new policy along these lines has been well put by two past Directors of the Advanced Placement Program, Charles R. Keller and David A. Dudley. In favor of advanced credit, they argue that this gives the kind of support, psychological and otherwise, that is needed to sustain the Advanced Placement Program. As Keller has put it:

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[31] 357 Harvard students of the Class of 1962 took Advanced Placement Examinations.

> "The idea of giving college credit for work done in secondary school bothers many college teachers. Why credit? they ask, and I reply that, although some students seem not to be interested in credit, credit has to be the coin of the Program. We have to play for keeps. Credit keeps standards up; credit is meaningful to school boards, administrators, parents, teachers, and students."32

Dudley argues in a similar vein:

> "I myself like to see a college grant credit because I think the award of credit is deserved and is the sort of generous gesture that the strong can afford to make. I think it is important to the morale of the advanced placement student in high school--and to the morale of the high school teacher--that the college give this full recognition. In actual practice, you will find that the gesture will cost the colleges little. A good student who receives credit for one or two subjects will make good use of his time. In other words, in most cases he will make use of the released time to take more advanced courses. Where he fails to do this, he may still be making good use of his time but in ways that are not easily stated on a transcript. He may simply be doing a great deal of extra reading."33

Both Keller and Dudley give support to acceleration. The former writes:

> "Most advanced placement students to date have entered college with few course credits, one or two at the most; they have not accelerated--nor are they, for the most part, acceleration minded. But perhaps acceleration is not always a bad thing; particularly for students who are going on to graduate school. Maybe in the years just ahead acceleration will be welcomed as one way of dealing with increased numbers of students in college."34

Dudley adds:

> "A student who aspires to college acceleration will find it necessary to establish advanced credit in three,four, or five subjects, a very exceptional feat indeed. But when such an unusual student may wish to drive ahead faster than others, my own personal sentiments would be to clear the track for him."35

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32. Charles R. Keller. "Piercing the 'Sheepskin Curtain.' " College Board Review, 1956.
33. David A. Dudley. The Advanced Placement Program(mimeographed copy of a talk delivered in December,1957).
34. Keller, *ibid*.
35. Dudley, *ibid*.

We have come to the conclusion that advanced credit should be given when merited and that accelerated programs of study should be approved and encouraged when it is clear that such programs would best serve the interests and objectives of students. Needless to say, we also favor the continuation of a policy of granting advanced placement.

By granting advanced credit, we could give due recognition to academic achievements for which we now give college credit, and at the same time reinforce the attempts made in secondary schools to give superior students the advantages of advanced instruction. Obviously, if we adopt this policy, appropriate mechanisms for implementing it would have to be worked out.

In regard to acceleration, we believe that no obstacles should be placed in the way of a student who has good reasons for completing his education in less than four years. It is but slavish adherence to custom to assume that all students need the same amount of time to attain given educational objectives, or that this time-span must necessarily be four years. To encourage acceleration does not mean that many students will actually accelerate. Acceleration is theoretically possible now, but very little of it is actually taking place. There may be a little more of it, however, were we to grant advanced credit and lend some measure of encouragement to those for whom acceleration may be appropriate.[36] Doing both of these, as mentioned by Dean Esty, may attract a number of superior students who now seek out other institutions which give advanced credit and encourage acceleration.

An Experimental Approach to the Teaching Process

A number of colleges in recent years have sanctioned experimentation for the purpose of assessing the value of new methods of instruction. At Oberlin College, for example, a research program was undertaken during the academic year 1957-1958 "concerned with finding more effective ways of utilizing instructional time at the undergraduate level."[37] The purpose of the research project "was to determine whether or not undergraduate students in introductory science and mathematics courses could make normal progress in their studies if they were required to work independently and without classroom contact for one-third of the college year."[38] The experiment was conducted in freshman courses in mathematics and zoology and one upperclass introductory course in psychology. The general pattern of the experimental design was to expect students in the "experimental" groups to absent themselves from class for a certain portion of the school year and engage in independent study. One major conclusion drawn from the study was "that students who are required to spend one-third of their course time in independent study will learn as well as students who are in classroom contact with their instructor for the entire course."[39]

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[36] One means of encouragement would be to grant credit for educationally productive work done during the summer months. We might devise special reading programs for this purpose, or grant credit for other types of activity during the summer months.

[37] Report on Independent Studies Experiments at Oberlin College, 1957-1958. [38] *Ibid*. [39] *Ibid*.

One interesting comment was made in the report of the Oberlin project:

> "While there was no feeling among the five instructors that the outcomes of this experiment would have far-reaching or immediate effects upon the teaching process at Oberlin, there was the feeling that people's thinking had been loosened up a bit. Many students and some faculty have come to look critically at the convention of rigidly scheduled weekly class meetings for a set number of weeks each semester. Perhaps the experiment has served as a reminder to some that like all conventions, the traditional instructional procedures now employed need to be occasionally re-examined for their validity."[40]

This statement is only one example of an interest currently being evidenced in the more rigorous assessment of the value of time-honored methods of instruction and in testing the merits of innovations. We believe that similar interests should be encouraged at Amherst. One of the fortunate by-products of the developing crisis in education is its effect as a stimulus to new thought about the teaching and learning processes. We cannot properly remain indifferent to this type of concern.

We are very much in favor of establishing an atmosphere at Amherst which is conducive to constructive innovation and experimentation. Some of this activity, we believe, should be directed toward finding more economical ways of using faculty resources. Why, for instance, should not a faculty member be allowed, if he believes it worth trying, to offer a course during some term in which he deliberately reduces the time spent in contact with students in order to assess the value of so doing? Or why should we not give some attention to instruction by television(possibly in courses that may have substantial four-college enrollments in the future)? Certainly we should at least remain abreast of any promising developments in this area. To be insensitive to the demand of our times for new educational approaches is, for the small private college, tantamount to abdicating the role it is uniquely equipped to assume. We have nothing to lose by a commitment to educational experimentation and innovation; hopefully we may thereby be able to contribute something of value to the educational world at large.

We recommend, therefore, that general approval be given to a policy of encouraging an experimental approach to the teaching process, with special emphasis on the search for more economical ways of using faculty resources.

Fostering an Interest in Teaching Careers

In our earlier discussion of the economic implications of curricular decisions, we referred to the significance of the much-publicized impending shortage of teachers at all educational levels.

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[40] Ibid.

It remains to ask whether we can do anything to help reduce this shortage. It seems to us that something can and should be done on two fronts.

Now, perhaps more than ever before, it seems to us that faculty members should do their utmost to stimulate properly qualified students to consider a teaching career on the college or university level. We should not underestimate the influence a faculty member may have upon a student when he suggests to him that he appears to be well suited for a college teaching career. Fortunately, at the present time, this influence may be more effectively exerted than in the past, inasmuch as we can now stress that a commitment to a teaching career is not likely to be as much of a commitment to poverty as once may have been the case.

The problem of getting more Amherst students interested in and prepared for teaching at the secondary school level may quite possibly be met by something more than persuasion alone. A few faculty members have been engaging for some time, on a voluntary basis, in an examination of what Amherst College could most effectively do in this area. They have shared some of their ideas with us, and we have concluded that their explorations should be continued until an adequate policy has been formulated. We believe the problem involved to be sufficiently important, as well as complex, to warrant the formation of a committee to study it more thoroughly.

Implications of an Increase in the Number of Students Planning Graduate Work

We have been asked by some members of the faculty what we propose to do about the fact that an increasingly larger number of students coming to Amherst are planning to do graduate work. We see no need for any special recommendations on this subject. The intention of many of our recommendations has been to help create an academic environment more conducive to scholarly pursuits. Ample provisions have been made for supplying the kind of education that will lay good foundations for any subsequent educational program. We certainly do not believe that the trend under discussion is one that demands any departure from the traditional position that our primary function is to give every student a broad liberal education. On the contrary, this trend demands that that we do our best to guarantee that students will not engage in excessive specialization as undergraduates.

Admissions Policies

A number of our proposals have implications for admissions policy. We have assumed throughout our discussions that Amherst College is in the position to attract an able student body. Our recommendations have been formulated accordingly. It is a complete waste of time to construct the blueprints of a good educational program unless we can be assured of getting students who are seriously interested, among other things, in their education. We have not, as we originally contemplated doing, made any detailed study of current admissions practices. We believe that this may be better done later in the light of any curricular innovations that may be adopted. We can point, however, to a few implications of our proposals for admissions:

> 1. We have recommended that before long Amherst College should begin to exert pressure to get prospective students to study one foreign language for at least three years, preferably four, while in secondary school.
>
> 2. Although we have recommended the continuation of a prescribed freshman program, we have urged more flexibility with respect to requirements in order to insure that we shall not have to refuse admittance to students whom it would be especially desirable to have at Amherst.
>
> 3. We have recommended the adoption of two practices: (a) granting advanced credit; (b) encouraging acceleration. These may have some effects upon admissions.
>
> 4. We hope that the general curricular model we have constructed will be attractive to the able student. We believe that special attention should be given in our publicity to the possibilities for independent study of various sorts.

The Committee on Educational Policy

We believe that a Committee on Educational Policy has more significant functions to perform than any other committee of the college. We are convinced that the maintenance of a vigorous educational program at Amherst, especially during the next decade or two, will depend in no small measure upon the seriousness with which the functions of this committee are approached and carried out, and upon the cooperation it receives from the faculty. We should be able to look to this committee for the guidance and direction needed to help keep us abreast of what will doubtless be a time of fermentation and change in the educational world.

It is difficult to improve on the admirable statement made by the Long Range Policy Committee concerning the functions of the Committee on Educational Policy:

> "We believe that...the Curriculum Committee should assume a much more important role in determining the educational policies of the college than has heretofore been the case. Its mandate should not be merely 'to watch the curriculum,' to act as a board of cenorship passing on new courses, but, of its own initiative, to undertake studies and make reports suggesting to the faculty such innovations or reforms as it believes would improve our practices."[41]

Despite this statement, however, we have gone through a period in which, for some unaccountable reasons, a "watchdog image" of the Committee on Educational Policy has been created. This should be dispelled once and for all! This committee should never be permitted nor encouraged to view its functions as consisting of the protection of anything except the best educational practices demanded by changing times.

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[41] Kennedy, ibid., p.85

We have two further suggestions to make. We favor our present practice whereby nominations for membership to the Committee on Educational Policy are made by the Committee of Six. This makes it possible to give due consideration to a variety of factors that should be taken into account when appointments to the Committee on Educational Policy are contemplated. We recommend, however, that the Committee of Six, in the future, present the faculty with no more nominations than are needed to fill vacancies. This proposal does not preclude nominations from the floor of the faculty meeting; but we hope that this would not normally be deemed necessary.

We also believe that the Chairman of the Committee on Educational Policy should be relieved of some teaching responsibilities, in order that he might be able to devote the time and energy needed to make the proceedings of the committee as productive as possible of new ideas and guides to action. A Chairman-Elect of the Committee on Educational Policy should be designated early enough so that his schedule for the succeeding year can be planned.

Grading Practices

In view of the considerable amount of discussion that has recently been centered on the subject of grading practices, we assumed that our committee would give careful attention to this matter in our general review of educational policies and practices. In the course of our deliberations, however, the Committee of Six requested the Committee on Educational Policy to study one aspect of grading, namely, whether a good case could be made for withholding grades. In considering this problem, the Committee on Educational Policy found it difficult to avoid dealing with a number of additional questions about grading practices. They have accordingly made an intensive study of the whole problem of "grading" and will issue a separate report on their conclusions. For this reason we make no recommendations in our report on the subject of grading practices.

The Library and Curricular Change

We strongly suspect that the effect of adopting our proposals will be to increase the demands upon our library facilities. If this is so, then some way must be found to meet the demand. A library is an extremely important part of the College and will become even more so if we put a curricular plan into effect that requires students to make more use of it. We can think of few better ways to use the financial resources of the college than to equip the library with all that is needed to meet our curricular needs.

IV. FORMAL RECOMMENDATIONS

The recommendations made in the previous section are assembled below and stated as formal proposals. Section I deals with those pertaining to aspects of the curricular structure and related considerations; Section II, with recommendations related to matters of general educational policy and practice.

Section I. Recommendations Pertaining to the Curricular Structure and Related Considerations

A. New Academic Calendar

1. We recommend the adoption of a new academic calendar with the following features:

   Term 1. 13 weeks plus an examination period

   Term 2. 5 weeks

   Term 3. 13 weeks plus an examination period

B. Four-Course Plan

We recommend:

2. The adoption of a four-course plan for terms one and three.

3. That all courses be assigned "unit values" instead of "credit hours."

4. That, after the freshman year, nothing but "one-unit" courses be permitted in the fall and spring terms.

5. That the maximum number of class meetings in courses be as follows: (a) one-half unit courses, two; (b) one-unit courses, four; (c) one and one-half unit courses, six. Science courses should be permitted to schedule one laboratory session per week. If more laboratory periods are planned, there should be a reduction of one class hour for every additional laboratory period. No deviation from these regulations should be permitted without the express consent of the faculty.

6. That the concept of a "course" be divorced from any fixed number of class meetings below the recommended maxima.

C. General Requirements

We recommend:

7. That thirty-five units of work be required for graduation.

8. That students be required to elect a minimum of three units of work during the fall and spring terms. (This is an adaptation of our present requirement which demands that students take a minimum of fourteen credit hours of work per semester).

9. That all students be in residence during the midwinter term unless exceptions are approved by the Dean. (We assume that these exceptions will be made rarely and for good reasons).

D. Foreign Language and Physical Education Requirements.

We recommend:

10. That all students be required to elect a course in a foreign language at the literature level, and that no student should be given more than two units of credit for work in a foreign language taken preparatory to entering a literature course. The latter regulation is not intended to apply to any student who wishes to study a different language after having satisfied the language requirement.

11. That less time than is now the case be spent in foreign-language pre-literature courses on drill work conducted for the purpose of developing oral-aural proficiency.

12. That a maximum of five hours of class meetings per week be scheduled for pre-literature courses in foreign language.

13. That a committee be established to explore the feasibility of offering foreign language instruction at Amherst during the summer. (If instruction in foreign languages could be made available during part of the summer, we might then entertain the idea of either encouraging or requiring prospective freshmen who lack the necessary skills in a foreign language to take advantage of it. Perhaps something could be worked out in this connection on a four-college basis).

14. That a physical education requirement be maintained for freshmen and sophomores, and that it consist of the following:

    14.1 All students should be required: (a) to pass physical fitness tests; (b) to demonstrate an ability to swim 100 yards; (c) to engage in a "team" sport for one term and a "recreational" sport for another term.

14.2 All freshmen who are not members of athletic teams should be required to attend physical education classes for three hours a week during each of the three terms.

14.3 All sophomores who are not members of athletic teams should be required to attend physical education classes for two hours a week during each of the three terms, unless given permission by the Physical Education Department to assume responsibility for their own physical fitness. When students fail to maintain fitness under the latter conditions, they should be re-assigned to physical education classes in the sophomore year, or even in the junior year if necessary.

15. That we do our utmost to give students as much free time as possible during the latter part of the afternoon for participation in the various aspects of our physical education program.

E. Public Speaking

16. We recommend the discontinuance of a requirement in Public Speaking.

F. Freshman Year

We recommend:

17. That the following freshman program be approved:

Term 1	Term 2	Term 3
Humanities (1)	Humanities (½)	
18-week course		
	History (½)	History (1½)
	18-week course	
Science (1½)		Science (1)
Elective (1)		Elective (1)
English Composition (½)		English Composition (½)

18. That freshmen who are not prepared at entrance to elect a literature course in a foreign language be required to take a pre-literature course during the first term of the freshman year and continue such work until they become eligible for admission to a literature course. The point, however, at which a literature course is taken to satisfy the language requirement should be left up to the student and his advisor.

19. That our practice of offering section work in freshman courses be continued and that every effort be made to keep the sections as small as possible.

20. That appropriate sectioning procedures be used in any freshman course to accomodate to the fact that some students come better prepared than others for advanced work in the required areas of study.

21. That,if sound educational reasons can be advanced for so doing, a student be excused from at least one of our required freshman courses, or be permitted to defer the satisfaction of a requirement to the sophomore year. If excused, he should be required to take a comparable amount of work in the division which includes the course from which he is excused. (We expect that this proposal will involve only a small percentage of students. It should be tried on an experimental basis for a period of three years and an appropriate committee- perhaps the Admissions Committee- should be designated to put it into effect).

G. Distribution Requirement After the Freshman Year

We recommend:

22. That an American Studies course, offered in terms one and three, be required of all students.

23. That students be required to elect a one-unit course in biology and a one-unit course selected either from the offerings of any department in the division of Mathematics and Natural Science or from courses made available in the history or philosophy of science. The latter option should be provided on an experimental basis and originally be limited to a small number of students.

24. That two units of work be required in the Humanities division, at least one of which must be elected from the fields of drama, fine arts, music, philosophy, or religion. A foreign language literature course elected to satisfy the language requirement may not be counted toward the satisfaction of the distribution requirement.

25. That the distribution requirement be fulfilled before graduation, and not necessarily by the end of the sophomore year.

H. Sophomore Year

We recommend:

26. The development of "sophomore seminars" built around limited areas of inquiry, and made available for election during any term of the sophomore year. Sophomores should be permitted to elect only one such seminar.

27. That the following types of courses be made available during the midwinter term of the sophomore year:

    (a) One-half unit lecture-reading courses in areas of general educational interest.

    (b) Either full- or half-unit courses in the literature of foreign languages.

    (c) One-half unit courses in drama, fine arts, or music.

    (d) Full-unit small-enrollment "sophomore seminars."

    (e) A course in non-Western culture, organized around a series of lectures by an expert in that culture, a syllabus of required readings, and discussion sections.

I. Concentration Programs and Honors Work

Concerning general requirements, we recommend:

28. (a) That the requirement for a major consist of the completion of eight units of work; (b) that a student may, if he prefers, elect two of the eight units(but no more than two) in course work that is closely allied with the major subject.

29. That no student be permitted to elect more than twelve units of work in one subject(exclusive of the prescribed freshman courses)without special approval of the Dean.

30. That juniors give all of their time during the midwinter term to a course in the major department.

31. That seniors be permitted to use the midwinter term for purposes of independent study in the major subject without other course obligations.

Concerning interdepartmental programs of concentration, we recommend:

32. That no interdepartmental majors permitting fewer than six courses in one discipline be approved unless the courses comprising them have a clearly discernible pattern of organization and interrelatedness.

33. That interdepartmental majors be listed in the catalog only if approved by the faculty.

34. That interdepartmental programs of concentration devised on an *ad hoc* basis be permitted, but that a statement of the nature of such programs be filed with the Committee on Educational Policy and that they be subjected to periodic review by that committee.

Concerning "rite" students, we recommend:

35. That all of them be required to pass an "area" examination in the major subject as a condition of graduation.

36. (a) That all of them be required to engage in some type of independent research, culminating in the writing of a senior paper; (b) that a satisfactory paper be made one of the conditions for graduation.

37. That they be given one unit of credit for a satisfactory senior paper(normally due at the end of the midwinter term) and the passing of an "area" examination(to be given preferably near the end of the midwinter term).

Concerning honors work, we recommend:

38. That an honors program be continued for qualified and interested students.

39. That it consist of: (a) a major piece of research culminating in the writing of a thesis; (b) passing either an "area" examination or a "comprehensive" examination.

40. That a maximum of one unit of credit be allowed for honors work in the junior year and three units(one each term) in the senior year.

41. That grades for senior honors work be required only at the end of the senior year when the honors project and examination are completed.

J. Independent Study

We recommend:

42. That in the last two years students be permitted to take two units of work in Reading Courses or their equivalent in some other form of independent study.

43. That faculty members list in the catalog those areas of study which they believe could profitably be explored by means of an independent reading program and which they would be willing to supervise.

K. New Subjects in the Curriculum

44. (a) That some course work in sociology and cultural anthropology be offered, provided this is financially feasible; (b) that a committee be designated to determine the best procedures to be used in so doing.(This recommendation is made for the purpose of giving the faculty an opportunity to take a position on a much-debated subject. Its acceptance should be viewed simply as an endorsement of the general idea that some course work be offered at Amherst in the fields of sociology and anthropology. No commitment is involved

to any particular methods for achieving this end. Much more thought will have to be given to this before definitive proposals become possible).

45. That a committee be designated to determine the best means of providing for more attention in our curricular offerings to non-Western cultures.

L. Small-Enrollment Courses

We recommend:

46. That small-enrollment courses be offered in alternate years whenever possible.

47. That maximal use be made of four-college cooperation when course-enrollments are typically very small.

M. Review of All Courses in the Curriculum

We recommend:

48. That each department be asked to re-examine its course offerings and to submit a new statement on all courses it wishes to offer.

49. That a serious effort be made to reduce the number of courses offered.

50. That a committee be designated and charged with the responsibility of requesting departments to prepare and submit reports on proposed curricular offerings. These reports should be carefully reviewed by the designated committee and presented to the faculty for approval.

N. Additional Recommendations Concerning the Midwinter Term

We recommend:

51. The development of a fairly intensive college lecture series during the midwinter term.(Consideration might be given to the possibility, among other things, of building a lecture program around certain aspects of non-Western culture).

52. That no required chapel exercises, religious or secular, be scheduled during the midwinter term. (We believe the adoption of this proposal will not significantly reduce the benefits now derived from holding compulsory religious services or secular assemblies throughout the college year. The Christian Association Embassy might provide opportunities for the discussion of moral and religious issues during this period).

Section II. Recommendations Pertaining to Matters of General Educational Policy and Practice

O. Writing Skills

We recommend:

53. That faculty support be given to the policy of exerting pressure in all courses for competent and careful writing.

54. That the evaluation of a student's performance in any course take into account his mode of expressing his ideas in writing.

55. That students be required to rewrite carelessly and poorly prepared papers.

56. That a student's writing ability be considered in determining admission to Amherst College, whenever it becomes possible to get a sample of writing obtained under controlled conditions prior to admission.

P. Academic Counselling

We recommend:

57. That our freshman faculty-advisor system be strengthened and made to play a more important role in the life of freshmen.

58. That consideration be given to providing extra financial remuneration to those who act as freshman advisors.

59. That all students, beginning in the junior year, be assigned to a specific advisor in the major department and that, unless circumstances prevent it, this advisor assume responsibility for offering necessary advice and counsel throughout the student's major program.

Q. Advanced Placement, Advanced Credit, and Acceleration

We recommend:

60. That our present practice of granting advanced placement be continued.

61. That advanced credit be granted whenever this appears to be merited by the quality of a student's pre-college achievements.

62. That students for whom accelerated programs of study are appropriate be given every possible form of encouragement and assistance.

R. Experimental Approach to Teaching

63. We recommend that approval be given to the policy of encouraging an experimental approach to the teaching process, with special emphasis on the search for more economical ways of using faculty resources without jeopardizing the attainment of our educational goals.

S. Teaching Careers

64. We recommend that a committee be created to study what can and should be done to arouse interest in and prepare students for secondary school teaching. We believe this committee should be formed around the nucleus of those who have already shown an interest in this type of problem and who have made some of the relevant preliminary explorations.

T. Admissions Policies

65. We recommend that the question of Amherst's future admissions policies be studied at a later date by a new committee after matters of curricular and general educational policy have been settled.

U. The Committee on Educational Policy

We recommend:

66. That a Committee on Educational Policy be continued.

67. That the Committee of Six, in the future, present the faculty with no more nominees than are needed to fill vacancies.

68. That the Chairman of the Committee be relieved of some teaching responsibilities, in order that he may be able to devote the time and energy needed to make the proceedings of the committee as productive as possible of new ideas and guides to action.

69. That the Committee have both a Chairman and a Chairman-Elect.

V. Additional Recommendations

We recommend:

70. That the Dean be empowered to excuse students who fail a required course from the necessity of repeating the course at Amherst or taking a "similar" course elsewhere. If a student is so excused, he should be required to take further work in the division represented by the course which is failed.

71. That our present methods of computing a college average be replaced by the computation of two averages: (a) a separate freshman average; (b) a cumulative average for the remaining three years.

72. That courses be listed in the catalog as being elective for either freshmen, sophomores, juniors, or seniors, only when this type of designation is considered essential.

73. That the practice of permitting "reading periods" be continued for courses offered during the fall and spring terms.

V. CONCLUSION

We have been given the important but unenviable assignment of making a thorough review of the Amherst Curriculum and related educational policies and practices. We have tried to do what the 1954 Review Committee on the New Program recommended; viz., that "there should occasionally be a drastic review of the whole program. If it is still, for us, the best, enthusiasm for it will be revived; if not, something better, we hope, may take its place."[42] A report was expected of us at the end of a year. We have done all that was possible during this short period of time. Certain important considerations have undoubtedly been overlooked. If so, we hope the necessary remedies will promptly be supplied.

In carrying out our assignment, we have become aware of the enormous complexity of the tasks which must be faced by colleges and universities throughout the country. In the face of what promises to be a critical period for higher education, we believe that the only sensible posture for a college to assume is one of continual readiness for change and new departures. What we have offered is short-range policy. What is now most needed is a vigorous Committee on Educational Policy which will not permit us to lose touch with the disturbing realities and exciting possibilities of the future.

Amherst College we believe to be a good college. Much is being done here that is educationally sound. But a good college, to remain so, can never permit itself to become complacent. Its aspiration must always be to improve; its basic policy, to subject its educational program to periodic tests of critical scrutiny. When such tests are made and suggest the need for changes, these changes must be effected if we want to maintain a vigorous institution.

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[42] Ibid., p.254

Although we have proposed no radical departures from our current educational philosophy and practice, we have found much to recommend in the way of change. We have been encouraged to do so by the belief that our recommendations would be directed to a responsive faculty. It is now for the faculty to decide how many of our proposals should be translated into accepted policy. It is our hope that we shall be able to enter into a period of discussion during which all participants will be governed by the common purpose of making "education at Amherst," synonymous with education at its best.

APPENDIX I

THE AIMS AND OBJECTIVES OF PRESCRIBED COURSES

A. English Composition[1]

English 1-2 addresses itself to the problem of what can be done to improve an Amherst freshman's skill in writing. As a course it has now existed for twenty years, and since every term we make a fresh set of assignments and carry on a different conversation with our classes, all that remains constant is our aim and general method. Our aim is perfectly clear, to do everything that we can think of to engage the student in the act of writing a decent sentence, an intelligible paragraph, a coherent paper, so that he becomes aware for himself of writing as an art, conscious that he is doing certain things with words for certain purposes. Writing is as hard work as anyone can do, as hard as thinking clearly, seeing something new, inventing, creating, having an original idea. No one has ever known how to teach another person to do any of these things, to write, to think clearly, to invent, to be original, yet in the process of education there are moments when the student seems to learn something, often under unpredictable circumstances, often when the teacher himself is almost unaware of what is happening. In their assignments the teachers of English 1-2 try to imagine opportunities for writing, try to create a variety of situations in which an Amherst freshman may find if only for a moment that he has something to say, and our best expectations are that the student will respond with varying degrees of attention and energy and that some papers will be better than others. We know that learning to do something takes time and that if one does a lot of writing, day after day, over a period of months, something may come of it. Hence the student writes a paper for every class hour, three papers a week the first term, a long paper, an examination, two papers a week the second term, a long paper, an examination. These papers are read carefully and thoughtfully, are commented on particularly, and the teacher suggests in various ways to the student that he is writing for a critical reader and that this relationship can be considered and made use of by the writer. In class we use mimeographed examples from students' papers, trying, in the form of dialogue between teacher and student, to make intelligible our reasons for praise, to locate what seems muddled and wrong, and we take proper notice of spelling, punctuation, grammer, usage, all that is vulgarly thought of as "English." In this connection it may be added that the whole level of student writing at Amherst College would immediately be raised if those members of the faculty who read their students' papers refused to recognize any difference between form and content, between "English" and whatever their subject may be and thus refused to tolerate what is really only one aspect of a more general slovenliness.

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1. Statement written by Professor Baird.

At the beginning of the year we give every freshman a statement describing English 1-2 in which he is informed that it is a composition course, it is not the conventional Freshman English of the large university, it is not used as an introduction to further courses in the English Department but is conceived of by its teachers as part of the student's general education. He is told that the subject of his writing is his own experience and that he will learn what he learns for himself. The teacher promises to read the student's papers and to comment on them in his role as a critical reader. He also offers to read as many rewritten papers as the student will do, an offer which makes it possible for anyone who wants to teach himself how to write to do so. It is occasionally taken up.

No sensible teacher would go an inch out of his way to be allowed the privilege of reading Freshman Themes, and in many English departments being relieved of this chore has long been considered the first step upward in the profession. Let it be said plainly: the paper-reading in this course is extremely burdensome. Despite the brilliant paper records of every entering class it may also be said that our freshmen have read scarcely anything, they know nothing except what they have been expensively taught by teachers, and with few exceptions they feel no particular desire to say anything to anybody about anything. Furthermore our sections have always been larger than in other freshman courses at Amherst, are larger even than those in Freshman English at the University of Michigan.

English 1-2 should exist, can exist, only under two conditions. First, where it is generally believed by the Faculty that an attempt should be made as part of the formal educational process to do something about the quality of the Freshman's writing. Second, where a sufficient number of teachers find in this generally despised labor an opportunity to use their intelligence and knowledge and imagination in a problem quite as difficult and absorbing as any they encounter in any of their other teaching.

B. History[2]

There are a number of reasons why we believe that a course in the development of European or Western Civilization is a highly desirable component of the Freshman program of study. This may follow substantially the form of the present History course or it may be presented by any one of several modifications in the method of presentation which the staff of History 1 is now exploring. Modification will of course be necessary if the proposed 13-and-5 week calendar goes into effect.

The rationale for such a course consists of both its method and its content. In terms of method, an historical approach to ideas, theory, and events serves a valuable role in starting the Freshman on his college experience. It teaches him to move from the secondary school technique, which too often emphasizes memorizing and which usually deals with a limited body of material, to the college emphasis on mastering a larger amount of material presented in several ways, with the aim of leading him to form his own synthesis. The Freshman must use his mind, must make his own interpretations and generalizations, and must form his own conclusions. Since there is no simple, absolute truth about the past and since every generation rewrites its own history, the student is taught to realize that it is the critical use of evidence rather than the evidence per se that is important. Moreover the Freshman forms new habits of work, at the same time that he acquires awareness of the nature of historical inquiry.

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[2] Statement written by Professors Salmon and Havighurst.

Recently, and to a larger degree than in the past, the reading for section discussion has consisted of original documents contemporaneous with the general topic of the week and focussing on ideas and theory in the political, economic, and social fields. This emphasis requires the student to deal with the raw materials of the social science disciplines and to make his own associative connections and independent interpretations. This process gives added meaning to the interpretations of others which he encounters in the lectures and in the hundred-odd pages of general reading he does each week. It gives an individualized approach to the past which is far removed from mere memorizing. At the same time we insist on a solid basis of fact and encourage the Freshman to base his conclusions on evidence, rather than on vague and unsupported generalities. In short, he must possess some knowledge of historical developments as well as having observed and practiced the formulation of historical insights.

The course deals with a chronological segment from the ancient world to the present. It is designed to lead the student to apply to the history of ideas concerning the state and political authority the sort of inquiry and interpretation mentioned above. Likewise the substance of the course includes an examination of the forces shaping the prevailing economy of the major periods and of the dominant social forces. Thus the Freshman can perceive the balance between the changing patterns and the elements of continuity which has produced the western cultures and the civilization of our day. Within the limits of the time available we are able to show the interaction of the West and the non-West (American-Indian, Arab and Moslem, African, and Asian) from the Era of Discovery to the institution of modern Imperialism, and thus to provide a broad frame of reference for understanding the international tensions of the current world.

The points listed below provide some indication of the direction in which the department is moving in the reorganization of the course:

1. We contemplate the creation of a committee from the department which will work out during the academic year 1959-1960, a reorganization of the present History 1-2. The first duty of this committee will be to agree on the major theme or emphasis of the course. When this general formula is approved by the department as a whole, the committee will proceed to work out the details of a lecture schedule and of prescribed and recommended readings.

2. In general it is envisaged that the new History 1-2 will take larger notice of non-Western cultures.

3. We are considering proposals to place even greater emphasis on the work of Sections. There has been tentative agreement on a schedule of two lectures and two Section meetings per week. There will be a common core of reading for the entire class but Section instructors will be given considerable latitude in determining the character of Section meetings and will be able to experiment with both methods and materials. We hope that Section instruction will provide more progression in techniques and materials than is possible when all Sections depend on the same reading.

C. A Freshman Course in the Humanities: Classic Books of the Western Tradition[3]

The course which we aim to describe in this appendix is one not very different, in conception at least, from the present required course, Humanities 1-2. It seems advisable, however, to attempt a more explicit statement of aims than has ever been made in connection with the present course, and to suggest some measures by which those aims may be more nearly realized. In writing this description we shall be drawing partly on our experience as teachers of Humanities 1-2, and partly on our sense of possibilities which have not yet been achieved.

The principal object of the course may be succinctly stated. It is to bring the student into the presence of a few indisputably first-rate books. This may seem a very modest aim: in reality it is not so. The danger is rather that it may be too ambitious. Most of our entering students have, in a certain sense, encountered first-rate books before: but very few of them have begun to derive an idea of the range of interests which the best books unite, or the wealth of implication they contain. And beyond this, a young student is still less likely to have grasped that a serious book is apt to touch on troubling things, and its creation to be sometimes an act of passion as well as an act of thought. Ideally the course ought to be a series of illustrations of Milton's famous sentence in Areopagitica, that "a good book is the precious life-blood of a master spirit." One is not genuinely in the presence of a book unless one has some sense of the depth of the author's engagement with his subject.

Lectures may be of use in the course; but discussion in small sections is the teaching method on which main reliance should be placed. It is essential that the student should be met. His spontaneous opinions will generally be formless and inept: he must be taught to order and refine them. Attention must be kept on the activity of reading, but that activity should not be narrowly conceived. At one moment it may be appropriate to concentrate on the vital surface of a single page; at another on an idea which emerges only from the whole. At all times there should be concern to induce that attitude of alert and dextrous attention which skilful reading assumes.

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[3] Statement written by Professor Moore.

No single approach or method should be prescribed; each teacher should evolve his own, and if he is wise he will vary his tactics from time to time. In teaching the existing course we have sought to maintain the spirit of the amateur. For the purposes we have in view the knowledge of a specialist is not necessary, and likewise not sufficient. The greatest books do not address their readers as specialists. They can be counted on to elude any approach to some extent; but upon a purely specialized approach they pass a stern and silent judgment. That is not to say that the teacher's special skill and knowledge, where he has any, are valueless; but his function is not to impart that skill and knowledge; it is above all because he is an educated man that he is qualified to teach the book, and the most important skill he has to impart is one which only his example can convey--the skill of responding as fully and appropriately as possible to a great literary masterpiece. The point is well put by the Harvard Committee on General Education in a Free Society:-

> "It will not be possible to consider more than some selection of those things in each book for which it has been most regarded; and this selection will need all the instructor's wisdom. It will include the greatest, most universal, most essential human preoccupations first. Whatever is left unnoticed is sacrificed in the interests of these. The treatment which is attempted of these great themes can only do its best to be worthy of them. They themselves are its inspiration. Beyond all techniques of pedagogy and scholarship these books have been masters of method. The instructor can only seek to be a means by which the authors teach the course."[4]

In recommending the spirit of the amateur we intend to imply that the greater literary masterpieces are enjoyable and ought to be enjoyed, even by freshmen. Enjoyment does indeed depend on understanding; but it need not wait until understanding is complete, if that time should ever come. There is an art of killing books--we would not willingly be professors of it. But neither enjoyment nor the spirit of the amateur, in our conception, necessarily preclude hard work or the application of rigorous intellectual standards. "Amateur" must not be taken as a euphemism for "dilettante"; we are not offering an apology for crankiness or triviality. These ought to be discountenanced in any college classroom, and most of all in one devoted to classic books.

The question may be asked, "Granted that there are good reasons

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4. General Education in a Free Society: Report of the Harvard Committee (Cambridge, Mass., 1945) p. 207.

for requiring the freshman to read something, why should they read such an array of books as has usually been read in Humanities 1-2? Why not, for instance, require them to take a course in English literature, which comprehends books as great as may be desired, and written, moreover, in original English? Why choose other books which must be read in translation?" This question deserves a careful answer.

For one thing, we do not believe that Plato in translation is as good as Plato in Greek, or Dante in translation as Dante in Italian. We are ready to believe that, Second Isaiah in Hebrew is far better than the eloquent author we read in the King James Bible. Experience nevertheless shows that young students can learn much from studying a book in translation, and that what he can learn is important. Anyone who believes the opposite had better erase Tolstoy from his memory unless he reads Russian, and Job unless he reads Hebrew. Some things cannot be got in translation; but it argues a very unyielding prejudice to claim that nothing can. Consider Plato's Dialogues, for instance. They are among the most educative of documents. They are important for the ideas they express and the disposition toward thought they engender; they are fascinating as revelations of history; they are beautiful as works of art. Much of all this can be perceived by reading them in translation. One cannot have an adequate respect for books if one is indifferent to their actual words, nor yet if he is indifferent to everything else about them. We should wish to insure that a student's experience in the course should always include some encounter with his own language refined to perfect expressiveness. For this reason we should always wish to include some English books. But most of the classic books of our tradition, books which have powerfully shaped the awareness of Western Man, were not originally written in English; and our curriculum is so organized that a student may easily miss them altogether unless he meets them here. To bring a student to some awareness of the tradition he inherits is surely one of the most important aims of liberal education. If so, preference should be given in a freshman reading course to books which stand as central illustrations of that tradition.

In teaching the present course we have operated under two serious disadvantages. One of these is the fact that we have shared with the English composition course the one-fourth of the freshman's time that was in theory set aside for "humanities." In the first semester of our present highly organized curriculum, a freshman spends more than twenty hours in class: two of these hours are given to Humanities 1. Under these circumstances we have found it very difficult to do an effective job. Lessons need reinforcement if they are to be remembered. We might have made our attack more sharp and narrow, and restricted our materials more severely, than we have done, and so seared a few things into the freshman's memory. We have been unwilling to adopt this expedient, because it conflicts so sharply with our conception of the spirit in which a book ought to be read. If the present committee's plan for a revised freshman program is adopted, the allowance of time given to Humanities, and (equally important) the content in which that allowance is enjoyed, will enable us to plan and conduct our course with much less frustration. If we are able to claim a quarter of the students' attention for thirteen weeks, and a half for five further weeks, it should be possible to maintain a regard for clarity and emphasis without being obliged to feel that we have substituted a few drastic analytical reductions for the treatment we should have wished to attempt, namely an exploration more worthy of the subtlety and fineness of our authors.

We might perhaps mention here a possible way of using the freshman mid-winter term which may develop and which seems extremely attractive. One of the plans which the History department has under consideration for their offering is a course beginning with the end of the middle ages. If the mid-winter term were occupied by a phase of the history course dealing with the end of the middle ages and the Renaissance, and if at the same time the Humanities course were being concluded with books derived from the same period, it might be possible to achieve a degree of interrelation between the two. The resources of the Fine Arts and Music departments might likewise be called upon--we recall, in particular, that we have on this faculty a distinguished expert in Renaissance music--and if a Shakespearean production at Kirby Theatre happened to take place at the same time, that would be all to the good. The question has frequently been asked why the freshman history and humanities courses could not be combined or somehow integrated. Hitherto the difficulties in the way of this have always appeared insurmountable; but for the brief period of the mid-winter term they might, we hope, be overcome.

Our other principal difficulty has been the problem of staffing. It is not easy to staff a course of this kind. A teacher must bring his own resources to the course; and if he is to teach it with anything resembling authority, he had better have resources. At a bare minimum he will need at least these qualifications:

(a) He must be able to interpret literature with understanding and sympathy;

(b) he must have read broadly enough so that he will be familiar with the great characteristic attitudes which have assumed prominence in our tradition;

(c) he must be able to handle an abstract idea.

Teachers of the present course have been recruited from a number of different departments: History, Philosophy, Religion, Romance Languages, German, Classics, English, and in one instance even from Fine Arts. The staff has consequently tended to be a rather variegated group, in their assumptions and predilections no less than in the character of their professional preparation. Now there is no reason why a man in any one of these fields should not be an excellent teacher of Humanities. But it is by no means a foregone conclusion that he will be. We cannot repeat often enough that it is not sufficient for him to bring merely the expertise of the subject he happens to be master of. Any department that proposes to make an appointment of a faculty member who will teach in the Humanities course has a clear responsibility not to foist upon that course a man who is unqualified to teach it. As a matter of regular procedure such appointments should always be made with the consent of the Chairman of Humanities, and after full consultation with him. The

President, too, we feel, has a responsibility to see that the interests of this course are not neglected. Either the freshman Humanities course is important or it is not. If it is not, it ought not to be required. If it is, it must be adequately staffed.

D. Science[5]

The objective of the freshman science course is to deal with the main stream of physical concepts, laws, and ideas; to examine these matters in some depth, with sophistication and with adequate mathematical tools; to consider logical, epistemological, philosophical, and historical aspects; and to be of such a nature in subject matter and content as to be simultaneously a proper introductory course for science majors, a terminal course in physical science for non-science majors, and a "general education" course for both groups.

The course, as is well known, deals with basic concepts of mathematics and physical science. In mathematics the work begins with an introduction to inequalities, the elements of analytic geometry and the ideas of functions, and limits. The concepts of derivative and antiderivative (indefinite integral) of very simple functions (polynomials) are developed at about the middle of the first semester. The concept of the definite integral is developed immediately afterward. Attention then returns to such matters as the differentiation of more complicated functions (trigonometric, logarithm, etc.), implicit differentiation, rate concepts, maxima and minima, and an assortment of applications which are intended to give the student practice in dealing with the concepts and techniques of elementary differential and integral calculus.

In past years a substantial amount of time in the second semester has been devoted to additional analytic geometry, integration techniques, etc. This year a certain amount of this material, now considered of dubious value educationally, will be eliminated, and half of the second semester will be spent on an elementary introduction to logic, set theory, and Boolean algebra.

In the physics part of the course, the first semester is devoted to mechanics through the development of the energy concepts for translational and rotational motion. Calculus is used throughout the second half of the semester. Rotational kinematics is treated entirely in terms of derivatives and antiderivatives. Centripetal and tangential accelerations are derived in terms of limit arguments. The impulse-momentum and work-kinetic energy theorems are developed in the language of limits of sums (definite integrals), and the calculation of work done by a constant force is never treated as anything other than a simple case deducible from the primary definition of work as an integral.

In the second semester, four weeks are spent on the basic concepts of electricity and magnetism, four weeks on wave phenomena (including optics), and the second half of the semester is devoted to a careful, logical development of our concepts of the structure of matter, starting with Dalton and the evolution of the atomic-molecular theory and culminating with Bohr theory of the hyrdogen atom.

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[5] Statement written by Professor Arons.

A very significant feature of the course is its orientation toward the subject matter with which it deals. Always conscious of the fact that we are preparing future physics majors among the others, we are impelled to make the development of subject matter as rigorous and careful as possible; laboratory and problem work cannot be depreciated or neglected. At the same time it is essential to stand back, look at the discipline, and evoke its intellectual elements.

We take every possible opportunity to call attention to the "liberal arts" aspect of science as a human achievement--the beauty of its syntheses, the aesthetic nature of certain of its criteria, the way in which it has freed man of his feeling of insecurity in the face of nature.

Introductory mathematics and physics are an excellent vehicle for giving the student a first hand experience of the manner in which trained intelligence and a language facilitating abstract thought give us the power to penetrate to understanding of relationships and to insights beyond the self-evident. When these experiences are induced without fanfare and the full meaning is then explicitly called to the student's attention, practically all intransigence and antagonism toward the "required course in science" are wiped out. One does not have to belabor the point that in this intellectual experience there is a direct and valid carry-over to practically any other discipline in which the student thinks he is interested.

Every effort is made to make the student dissatisfied with treating a homework problem as an example with a single answer--an attitude which has been deeply implanted in the primary and secondary school experience. Problems are treated as suggestions of situations which should be argued about, analyzed, discussed in terms of possible knowns and unknowns, in terms of directions of change which can be imagined in the controlling variables, altered into new but related problems, the similarity to other physical contexts explored (e.g., electric vs. mechanical situation). The student must articulate complete explanations, be specific about the logic of development (e.g. does a given step of reasoning involve use of a primary definition, a derived result, an experimental principle, etc.), be explicit about idealizations, assumptions, limitations.

In the philosophical aspects we are not concerned with beating our breasts about the fix into which atomic physics has precipitated mankind or in creating a secular religion for a beat generation. We are concerned with freshman level aspects of epistemology, operational definition, meaning of "construct," the evidence on which statements of laws or principles are based, the role of empirical information and deductive and inductive reasoning in the evolution of a theory. We provide students with opportunity to articulate their own thoughts and growing understanding of these facets.

Examinations in the course consist of one, or at most two, problems which are "structured" so as to lead the student by the hand through an articulation of a logical line of reasoning and interpretation. On tests, the student must write sentences, not essays. He is not expected to do "original thinking" under pressure. His statements are graded for correctness of English as well as scientific content. Two examples of test items are as follows:

1. Given a source of 100 volts and two heating coils having a resistance of 10 ohms and 20 ohms respectively: Which will do a quicker job of heating a given amount of water to the boiling point? Give a thorough discussion of the reasons for answers (i.e.: identify whatever laws or definitions you make use of; make a clear statement of the relationship between certain electrical quantities you refer to and the problems of heating the water; etc.)

2. A constant, vertically upward force Q (greater than the weight of the body) acts on a body of mass m. The body starting from rest, is displaced upward a distance Δh from position h_1 to h_2 in a time interval Δt, at the end of which the force is removed.

    (a) Describe, in terms of energy transformations, the history of the motion of the body from the time the force Q is applied until the instant that the body returns to the initial position h_1. Include explicit statements about the relationships between quantities of various kinds of energy. (Make the description very concise - essentially an outline.)

    (b) Starting with the general mathematical definitions of work and impulse as integrals derive algebraic expressions (in terms of $Q, \Delta h, \Delta t$) for the impulse delivered and the work done by Q. Derive an algebraic expression for the work done by the net force acting on m.

Provisions are made for the writing of papers. These are based on fairly specific questions. We feel that "open-ended" essays are of little value at this stage of development since the student is likely to sail unknowingly into an expanse much vaster than his understanding. He then takes refuge in rich, beautiful prose instead of sticking to simple, precise statements. A freshman must learn to make the latter before he develops the maturity to say something meaningful in the former.

The nature of the laboratory experience is best described in the following quotation from the notes distributed to the students:

> "The purpose of this part of the Science course is: to afford you practice in the use of scientific language being developed in the classroom work, to

> bring you in direct contact with some of the physical ideas and principles being discussed in order to make them better understood and more readily remembered and to give you some direct, though very limited, experience of situations with which an experimental scientist deals and the nature of the problems he encounters.
>
> Very few experiments in this laboratory course will be 'set' experiments in the sense of consisting of a fairly elaborate apparatus about which you are given detailed, step by step instructions. In most cases you will be given very simple equipment and faced with very simple situations, the basic principles of which have been discussed in class and lecture work. Your instructions will be very few and very general; so general that you will first be faced with the necessity of deciding what the problem is. You will have to formulate these problems in your own words and then proceed to investigate **them**. Some situations will be so simple that only one attack will be possible, but in many cases different groups may end up investigating entirely different aspects of a given situation, and there is no intention that everyone must do the same thing."

There is one final characteristic of the freshman science course that deserves special emphasis. It is not only a "general education" course in science and mathematics; it also lays important foundations for subsequent work in science. It enables student to come to the chemistry department with a homogeneous background and a half-semester of material on concepts of structure and matter which constitute direct preparation for chemistry. With a background in chemistry, biology can be taught in its modern form as an experimental, predictive science with a conceptual basis, instead of as essentially descriptive natural science or taxonomy. The net effect is to enable the biology department to organize a program which not only implements the direct recommendation of the NAS-NRS committee on undergraduate curricula in the biological sciences but anticipates many things which were expressed only as pious hopes. A number of fine students are being attracted into the exciting new field of biophysics. It is apparent that a similar relationship to the introductory science course exists for the subjects of astronomy and geology.

The fact that all students have had the rudiments of calculus makes it possible for subsequent work in economics to invoke more rigorous analytical treatments and discussion than would otherwise be the case. Both economics and psychology students are in a position to approach statistical concepts from a more sophisticated point of view. The same tool makes it possible for students from any field to elect a junior year course in analysis of data and design of experiment.

Non-science majors may proceed to courses in philosophy or history of science with a point of departure in which they have actually delved vertically into scientific concepts and are not just making statements about science in words they do not understand.

It is clear that mathematics and physics play a fundamental, coordinating role in this curricular interplay not only because they are parent sciences in terms of conceptual structure but also because they are probably the easiest ones with which to illustrate the nature of scientific thought.

E. Problems in American Civilization, American Studies 21-22[6]

Problems in American Civilization (American Studies 21 and 22), now a required course for sophomores in the social science sequence, consists of a series of problems, historical and contemporary, which are designed to introduce the student to the kinds of subject matter which characterize this area of study. Problems are chosen and readings are selected which are designed to involve the student in learning to analyze situations and to make tentative decisions on controversial questions. In each case the student is asked to master the relevant facts, read critically, listen to four or five lectures on the subject, consider the possible solutions, write a short paper defending his conclusions, and participate in a two-hour seminar devoted to discussing the issues.

The problems are ordinarily political, sociological, philosophical, or economic in their emphasis though it is a virtue of the problem approach that it invites an investigation of the interrelation of these factors rather than an examination of each in isolation from the others. At least one problem each year, or a reading period assignment, is on a topic in the arts. The topics are dealt with during the first semester in a historical context. The emphasis in the second semester is on recent or contemporary questions. No attempt is made to secure broad coverage; by centering on a limited number of problems, study in considerable depth is permitted. So far as possible the students are introduced to and made aware of the special techniques which are available to scholars in the various social science fields, but no extensive training in these techniques is attempted.

The intention is that by focusing the course on controversial problems and questions of important public policy, the student's interest will be stimulated and that he will find himself involved in making tentative decisions which encourage him to read and think critically, to discover and re-examine his own presuppositions, to state his conclusions clearly and effectively in written form, and finally, to participate effectively in the give and take of a seminar discussion.

The approach developed in this course has commended itself to American educators. The materials prepared have been published in 31 paper covered volumes. These are used in over four hundred colleges and universities.

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6. Statement written by Professor Taylor.

APPENDIX II

ANALYSIS OF FOREIGN LANGUAGE STUDIES BY THE MEMBERS OF THE CLASS OF 1957 IN SECONDARY SCHOOL AND COLLEGE

Table I. Per Cent of Students who Studied a Given Foreign Language in Secondary School from One to Four Years.

No. of years language studied	French	German	Greek	Italian	Latin	Spanish	Total %
4	10.0	0.8	0.0	0.0	5.8	0.8	17.4
3	25.0	2.5	0.4	0.0	15.0	7.1	50.0
2	22.5	5.0	0.4	0.4	46.0	10.8	85.1
1	1.7	2.1	0.4	0.0	7.5	2.1	13.8
Total %	59.2	10.4	1.2	0.4	74.2	20.8	

Table II. Number of Year-Courses in One or More Foreign Languages Completed by Students in Secondary School.

Number of year-courses completed	% of students
11	0.4
7	3.3
6	9.2
5	20.1
4	32.5
3	24.6
2	9.2

Table III. Per Cent of Students who Studied from One to Three Different Foreign Languages in Secondary School

Number of foreign languages studied	% of students
3	3.3
2	61.7
1	34.6

Table IV. Courses Required in College to Complete the Language Requirement

Number of courses	% of students
None	22.1
One	45.4
Two	23.3
Three	8.3
Four	0.9

Table V. Foreign Language in Which the Language Requirement Was Satisfied Either at Entrance or Later

Language	% of students
French	58.7
German	12.9
Greek	0.0
Italian	0.0
Latin	12.1
Spanish	16.3

Table VI. Number of Semester Courses Elected in the Literature of a Foreign Language by Non-Language Majors after the Language Requirement was Satisfied.

Number of semester courses	% of students
8	0.4
7	0.0
6	0.8
5	0.0
4	2.1
3	3.4
2	7.7
1	14.5
0	71.0

Table VII. Total Number of Semester Courses Elected in a Foreign Language by Non-Language Majors after the Language Requirement was Satisfied.

Number of semester courses	% of students
7+	0.8
6	0.4
5	1.6
4	3.3
3	7.0
2	12.4
1	9.9
0	64.3

Table VIII. Additional Information

	Per Cent
Non-language majors who studied in college a foreign language not previously studied in secondary school.	10.8
Students who did not study a foreign language during the last year of secondary school.	33.0